In the Matter Of:

KELLI DENISE GOODE vs CITY OF SOUTHAVEN 3:17-cv-060-DMB-RP

GARY VILKE
December 08, 2017



1st in Reporting, 1st in Service, 1st in Technology

We Bridge the State and Cover the Nation! www.alphareporting.com, 800-556-8974

EXHIBIT 1

1	IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF MISSISSIPPI OXFORD DIVISION					
	ONFORD DIVISION					
3						
4	PERSONAL REPRESENTATIVE OF TROY CHARLTON GOODE,					
5						
6	OF ALL SIMILARLY SITUATED PERSON,					
7	Plaintiff,					
8	vs. No. 3:17-cv-060-DMB-RP					
9						
10	THE CITY OF SOUTHAVEN, et al.,					
11	Defendants.					
12						
13	VIDEOTAPED DEPOSITION					
14	OF					
15	GARY VILKE, M.D.					
16	DECEMBER 8, 2017					
17						
18						
19						
20						
21						
22	ALPHA REPORTING CORPORATION 236 Adams Avenue					
23	Memphis, Tennessee 38103 901-523-8974					
24	www.alphareporting.com					

```
3
            The videotaped deposition of GARY VILKE,
                                                                             APPEARANCES
                                                            2
                                                               FOR THE PLAINTIFF: (TELECONFERENCE APPEARANCE)
 2 M.D., is taken on this, the 8th day of December,
                                                                              TIM EDWARDS, ESQ.
                                                            3
                                                                              KEVIN McCORMACK, ESO.
 3 2017, on behalf of the Plaintiff, pursuant to
                                                                              Ballin, Ballin & Fishman
                                                                               200 Jefferson Avenue
 4 notice and consent of counsel, beginning at
                                                                               Suite 1250
   approximately 8:02 a.m. in the offices of Peterson
                                                                              Memphis, Tennessee 38103
                                                                              901-525-6278
   Reporting Video and Litigation Services, 530 B
                                                               TELEPHONIC APPEARANCE:
    Street, Suite 350, San Diego, California.
                                                                              JAMES F. GARRETT, ESQ.
 8
            This deposition is taken pursuant to the
                                                                              Eastland & Garrett, PLLC
                                                            8
                                                                              103 North Lamar Blvd.
   terms and provisions of the Federal Rules of Civil
                                                                              Suite 204
                                                                              Oxford, Mississippi 38655
10 Procedure.
                                                               FOR THE DEFENDANT, DR. DONJA OLIVER:
                                                           1.0
11
            All forms and formalities are waived.
                                                                              MARTY R. PHILLIPS, ESQ.
                                                           11
                                                                              Rainey, Kizer,
   Objections are reserved, except as to the form of
                                                                               Reviere & Bell, PLC
                                                           12
                                                                               50 North Front
    the question, to be disposed of at or before the
                                                                              Suite 610
                                                           13
                                                                              Memphis, Tennessee 38103
14
    hearing.
                                                                              901-333-8101
15
            The signature of the witness is waived.
                                                               APPEARING VIA TELEPHONE:
16
                                                           15
                                                                              J. RIC GASS, ESQ
                                                                              Gass Weber Mullins, LLC
17
                                                           16
                                                                              309 N. Water Street
                                                                              Milwaukee, Wisconsin 53202
                                                           17
                                                                              414-224-7697
19
                                                                            TELEPHONIC APPEARANCES
                                                               FOR THE DEFENDANTS, THE CITY OF SOUTHAVEN AND
                                                           19
2.0
                                                               INDIVIDUAL SOUTHAVEN DEFENDANTS:
21
                                                           2.0
                                                                              BERKLEY N. HUSKISON, ESQ.
                                                                              Mitchell, McNutt & Sams, P.A.
105 South Front Street
22
                                                           21
                                                                              Tupelo, Mississippi 38804
23
                                                           22
                                                                               662-620-6260
                                                           23
                                                           2.4
                                                                                                                   5
   FOR THE DEFENDANT, BAPTIST MEMORIAL HOSPITAL-
                                                            1
                                                                               EXAMINATION INDEX
    DESOTO:
                   DAVID UPCHURCH, ESQ.
                                                            3
                                                               GARY VILKE, M.D.
                                                                   Upchurch & Upchurch, P.A.
 3
                   141 S. Commerce Street
                                                                   BY MR. HUSKISON. . . . . . . . . . . . . . . . . 232
                   Suite B
                                                                   FURTHER BY MR. EDWARDS . . . . . . . . 233
 4
                   Tupelo, Mississippi 38804
                                                            5
                   662-260-6953
                                                                                 EXHIBIT INDEX
    FOR THE DEFENDANT, SOUTHEASTERN EMERGENCY
                                                            8
                                                               EXHIBIT
                                                                                  DESCRIPTION
                                                                                                             PAGE
 6
    PHYSICIANS, INC.:
                                                            9
                                                               EXHIBIT NO. 1
                                                                               NOTICE OF DEPOSITION
                                                                                                               8
                   MATTHEW R. MACAW, ESQ.
                                                               EXHIBIT NO. 2 ORDER FROM JUDGE PHAM
                                                                                                              47
                   McDonald Kuhn, PLLC
                                                               EXHIBIT NO. 3
                                                                               BLACK BOX INFORMATION
                                                           11
                   5400 Poplar Avenue
                                                                               FOR HALOPERIDOL
                                                                                                              74
                   Suite 330
 8
                                                           12
                                                                               UNRECOGNIZED HYPOXIA AND
                   Memphis, Tennessee 38119
                                                               EXHIBIT NO. 4
                   901-526-0606
                                                           13
                                                                               RESPIRATORY DEPRESSION
                                                                                                              75
1.0
                                                                               IN EMERGENCY DEPARTMENT
11
   ALSO PRESENT:
                                                           14
                                                                               PATIENTS SEDATED FOR
                   JAVAN HEARD, VIDEOGRAPHER
                                                                               PSYCHOMOTOR AGITATION
12
13
                                                               EXHIBIT NO. 5 LETTER DATED 1/21/01
                                                                                                              87
14
                                                           16
15
                                                                               (WILL BE PROVIDED)
                                                               EXHIBIT NO. 6
16
                                                           17
17
                                                               EXHIBIT NO. 7
                                                                               BOOK ENTITLED GUIDELINES FOR 98
18
                                                           18
                                                                               INVESTIGATING OFFICER-
19
                                                                               INVOLVED SHOOTINGS,
20
                                                                               ARREST-RELATED DEATHS, AND
21
    COURT REPORTING FIRM:
                                                                               DEATHS IN CUSTODY
               PETERSON REPORTING VIDEO & LITIGATION
                                                           2.0
                                                                               (NOT ATTACHED)
22
               Bobbie Hibbler, CSR, 12475, LCR 029
                                                           21
                                                               EXHIBIT NO. 8
                                                                               ATIVAN (LORAZEPAM) INJECTION 116
               530 B Street, Suite 350
                                                               EXHIBIT NO. 9 PERCEPTIONS OF SUPPORTED
               San Diego, California 92101
23
                                                                               AND117 PRONE-
                                                                                                    117
                                                           2.3
               619-260-1069
                                                                               RESTRAINT POSITIONS
24
                                                           24
```

				7011	
			e		
1		EXHIBIT INDEX		1	
2	EVILLDIM	(CONTINUED)	DAGE	2	, ,
4	EXHIBIT NO 10	DESCRIPTION METABOLIC ACIDOSIS IN	PAGE 125	3	
-	EXHIBIT NO. 10	RESTRAINT-ASSOCIATED	123	4	
5		CARDIAC ARREST		5	TO HOBBLE RESTRAINT 193
6	EXHIBIT NO. 11	CHAPTER 2. OVERVIEW]	EXHIBIT NO. 22 THE CARDIOPULMONARY EFFECTS
-		OF THE EMERGENCY	125	6	
7 8	FYHTRTT NO 12	SEVERITY INDEX RESTRAINT ASPHYXIATION			SUBJECTS WITH CHRONIC
U	EXHIBIT NO. 12	IN EXCITED DELIRIUM	148	7	OBSTRUCTIVE PULMONARY DISEASE
9				8	8 EXHIBIT NO. 23 CARDIAC FUNCTION CHANGES
10	EXHIBIT NO. 13	ARTICLE ENTITLED			WITH SWITCHING FROM THE 199
		EXCITED DELIRIUM	150	9	
11	EVUIDIT NO 1/	WHITE PAPER REPORT ON		10	
12	EXHIBIT NO. 14	EXCITED DELIRIUM SYNDROME	151	11	SUDDEN DEATH OF INDIVIDUALS 205
	EXHIBIT NO. 15	CHAPTER 7 EXCITED DELIRIUM		111	REQUIRING RESTRAINT FOR EXCITED DELIRIUM
		BY CHARLES WETLI	154	12	
14				12	EXHIBIT NO. 25 RESTRAINT IN POLICE USE
1 -	EXHIBIT NO. 16	ANESTHESIA IN THE PRONE	170	13	
15 16	FYHTRTT NO 17	POSITION BY DR. EDGCOMBE EFFECT OF PRONE	170		4 EXHIBIT NO. 26 NATIONAL MODEL EMS
10	EXHIBIT NO. 17	POSITIONING SYSTEMS ON	178		CLINICAL GUIDELINES 218
17		HEMODYNAMIC AND CARDIAC		15	5
		FUNCTION DURING LUMBAR			EXHIBIT NO. 27 CMS LETTER ON NEVER
18		SPINE SURGERY		16	5 EVENTS 2008 227
19	EXHIBIT NO. 18	THE PHYSIOLOGICAL IMPACT OF UPPER LIMB POSITION	180	17	
20		IN PRONE RESTRAINT	180	18	
	EXHIBIT NO. 19	ADULT TACHYCARDIA WITH		1.0	EXPERT REPORT 233
		A PULSE ALGORITHM	184	19	
22				21	
		SUDDEN DEATH DURING RESTRAIN		21	
23		DO SOME POSITIONS AFFECT LUNG FUNCTION?	188	23	
24		AFFECT LONG FUNCTION:		24	
1		UPON, EXHIBIT NO. 1 WAS PREM NY OF THE WITNESS AND IS ATT		1	1 MR. HUSKISON: Berkley Huskison 2 telephonically for the Southaven defendants.
3	HERETO.)		-	3	
	HEREIO.)				-
4				4	4 may now swear in or affirm the deponent.
5	THE VIDEOGRAPHER: Good morning.			5	GARY VILKE, M.D.,
6	Today's date is December 8, 2017. The time is				6 Having been first duly sworn, was examined and
	- · ·				
7	approximately 8:02 a.m. The location is 530 B				7 testified as follows:
8	Street, Suite 350, San Diego, California 92101.				8 EXAMINATION
9	This Case Number is 3:17-cv-060-DMB-RP. The file				9 BY MR. EDWARDS:
10	is in the United States District Court for the				
				10	
11	Northern Distr	ict of Mississippi in the ca	se of	11	1 state your name please?
12	Kelli Denise Go	oode versus the City of Sout	haven,	12	2 A. Gary Michael Vilke.
13	et al.			13	Q. And, Doctor, you are a resident of San
		e deponent today is Dr. Gary			
14				14	• •
15	Vilke. Counsel and all present please identify			15	5 A. Yes.
16	yourselves for the record.			16	Q. You have been disclosed as an expert by
17	MR. EI	DWARDS: Tim Edwards and Kev	rin	17	7 a number of the defendants in this case. Are y
					_
18	McCormack for N	wrs. Goode.		18	
19	MR. GA	ARRETT: Jim Garrett also fo	r	19	A. I know I've worked with counsel for
20	Mrs. Goode.			20	O Dr. Oliver as an expert. I'm not sure who else
-			1	21	
21	זרד כתעו	UTIITDC: Tim Marker Dhillina			L DOS CLISCIOSEO DE OS CDELL EXDELL.
21		HILLIPS: I'm Marty Phillips	nere		_
21 22		HILLIPS: I'm Marty Phillips along with Ric Gass.	nere	22	_
	for Dr. Oliver				Q. Well, you have been adopted by referen
22	for Dr. Oliver	along with Ric Gass. ACAW: Matt Macaw for Southe		22	Q. Well, you have been adopted by referen by all of the defendants I believe. Were you

11 I can't say I'm specifically aware of I believe it was shortly thereafter. Α. 1 Α. 2 it. No. 2 You are not a forensic pathologist, are 0. Q. All right, Doctor. You have given a 3 you? number of depositions; correct? I am not. A. Yes. Q. And you have been proffered in the case to give an opinion on the cause of death of Troy Actually you have testified in defense 7 of police departments who have had in custody in Goode; correct? 8 restraint deaths from the East Coast to the West Correct. A. Coast; correct? Q. You've never performed an autopsy? 10 I have had cases on both coasts. Yes. 10 Correct. A. 11 And places in between? Q. 11 Q. Your opinion is that Mr. Goode died of 12 what you term excited delirium syndrome; correct? 12 Correct. Cardiac arrest due to excited delirium 13 You are the go-to guy in the United 13 14 States for hogtied deaths; correct? 14 syndrome because of his LSD use. Yes. I have done a lot of research in the Well, excited delirium syndrome is a area and have been asked to testify many times. controversial concept within the field of medicine; correct? 17 For police departments? 17 A. 18 Police departments have retained me or 18 There have been some controversies 19 19 their counsel. Yes. within the field about that. Yes. 20 Excited delirium is not uniformly Yeah. But not -- you've not testified 20 21 for any plaintiffs? 21 accepted by medical specialties as a valid I think I testified a long time ago for condition; correct? 23 a plaintiff. 23 It's been accepted by specialties that 24 take care of patients in excited delirium. But 24 Was that before your 1997 study? 12 13 1 you wouldn't expect dermatologists or 1 beating correctly. 2 endocrinologists to recognize what that is. Q. His heart gave out; correct? 3 Has it been accepted by cardiologists? It would be a lay term for it. But the I know cardiologists who have. I don't reality is the electrical activity is defective. 5 believe it's ever gone and been requested to be 0. Well, you do understand I am a accepted by their national organization. layperson, so I might not use correct medical So the answer is no, the national terms; correct? 8 organization of cardiologists does not recognize That's possible. Sure. All right. You have noted in some of excited delirium? 10 That's a question I don't know. I don't your testimony that you are aware of Dr. DiMaio 10 11 know that I've been ever asked to answer that who was the medical examiner for the County of 12 question. Bexar, San Antonio, Texas; right? 13 Excited delirium is a concept which is I know he's a medical examiner in Texas. 14 heavily involved, if you will, with the I wasn't sure specifically what area. 15 functioning of the heart of people under certain He is a board certified forensic 15 16 stressors; is that correct? pathologist; right? 17 A. The heart is involved in excited 17 I don't know if he has board 18 delirium. Yes. 18 certification in there. I know at one point he And your opinion is that Mr. Goode died 19

20

22

23

24 death. Yes.

Forensic pathologists are the ones who

21 determine cause of death through autopsy; right?

They're the ones who perform the

autopsies and they do perform -- identify cause of

of excited delirium precipitated by LSD use and

That's a fair assessment. Yes.

A. It went into a dysrhythmia and stopped

That means his heart gave out?

21 resulting in cardiac arrest?

Α.

22

23

Q. And when a forensic pathologist can't

2 find a cause of death of a person who died under

- 3 the influence of drugs and in restraints put on by
- 4 the police, the default position is excited
- 5 delirium; correct?
- 6 A. I have never heard that be a default 7 position.
- 8 Q. That's where forensic pathologists who
- 9 believe in the concept of excited delirium go to
- 10 with cause of death when they can't find any other
- 11 when a person in police restraints dies under the
- 12 influence of a drug?
- 13 A. They have to have certain symptoms and
- 14 criteria that would meet the classification for
- 15 excited delirium syndrome. They don't have to be
- 16 in restraints. They don't have to be in police
- 17 custody. But if the findings and the presentation
- 18 is consistent with excited delirium syndrome and
- 19 there is no obvious other source of death like a
- 20 brain hemorrhage or a blood clot, they often will
- 21 use that as a diagnosis to identify the cause of
- 22 death.
- 23 Q. And if they find three or more markers
- 24 of excited delirium in your opinion, is that
- 16
- 1 present can be consistent with that diagnosis.
- 2 Q. Now Dr. DiMaio in San Antonio has
- 3 written books on excited delirium syndrome, you're
- 4 aware of that?
- 5 A. I know he's written at least one. I'm
- 6 not sure about several books. He's written on
- 7 chapters as well.
- 8 Q. Dr. DiMaio in his book on excited
- 9 delirium says that when a forensic pathologist
- 10 concludes that the cause of death is excited
- 11 delirium, that's what should go into the autopsy
- 12 report, specifically death due to excited delirium
- 13 secondarily struggle or whatever; correct?
- 14 A. You know, I haven't read his book in a
- 15 long time. So I couldn't say exactly what he put
- 16 in there.
- 17 Q. So you don't know?
- 18 A. I don't know what he said in that book,
- 19 no on that topic.
- 20 Q. And you do know that Dr. Barnhart who
- 21 was the forensic pathologist on this case -- do $\,$
- 22 you know that?
- 23 A. That is correct. Yes.
- Q. Okay. And you know that Dr. Barnhart

1 sufficient to designate the cause of death as

15

- 2 excited delirium?
- 3 A. Again, you sort of have to look at the
- entire picture, the presentation. Typically
- 5 there's more than three markers. If you're going
- 6 to identify a specific markers, usually there's,
- 7 you know, five or so. But there is no
- 3 identifiable specific number that would define
- 9 excited delirium. A lot of it is the clinical
- 10 presentation, the presence of drugs in the system,
- .1 the way they behave and act, and the lack of other
- 12 causes of sudden death. If they have sky high
- 13 potassium levels, then the cause of death is
- 14 probably hyperkalemic cardiac arrest. But you
- 15 have to look at the whole picture.
- 16 Q. But you do recognize certain markers
- 17 that indicate excited delirium; right?
- 18 A. There are a characteristics that are
- 19 consistent with the diagnosis of excited delirium
- 20 syndrome. Yes.
- 21 Q. Fair enough, characteristics. You
- 22 recognize certain characteristics as being
 - indicative of excited delirium?
- 24 A. They are looked for, and if they're
- 1 listed complications of LSD as a cause of death;
- 2 right?
- 3 A. That is correct.
 - Q. Where could you direct me to an
- 5 authoritative reliable medical text that list
- 6 complications of LSD as a cause of death?
- A. Complications of LSD certainly can kill
- 8 people.
- 9 Q. That's not what I asked, Doctor. I
- 10 asked where could you direct me to an
- 11 authoritative reliable text that lists
- 12 complications of LSD as a cause of death?
- 13 A. The ACEP White Paper talks about excited 14 delirium syndrome causing death and also
- L5 associated with LSD as one.
- 16 Q. The ACEP White Paper?
 - A. Correct.
- 18 Q. That's the one you wrote?
- 19 A. That's the one I participated with it
- 20 with an expert panel. Yes.
- 21 Q. Other than the one, the ACEP White Paper
- 22 that you wrote, point me to an authoritative
- 23 reliable medical text that list complications of
- 24 LSD as a cause of death?

I didn't research specifically for 2 complications of LSD. I know that it can cause 3 people to do things to kill themselves. I 4 reviewed articles on that. But if you're looking 5 for a textbook that says those exact words, I 6 don't know if it's if there or I just haven't 7 looked for it yet. So your answer is you don't -- you can't 0. point me to an authoritative reliable text that 10 list complications, in quotes, of LSD as a cause 11 of death; correct? That is correct. 12 A. 13 All right. Now can you -- have you done 14 in research in LSD? I've haven't done specific research. 16 You mean, looking at the drug itself? 17 Q. Yes. 18 A. Then no. 19 Ο. You're not a pharmacologist either, are 20 you? 21 A. I am not. No. You can't give a toxic level of LSD, can 22 Q. 23 you? 24 LSD itself is to be -- thought to be one

19 1 of the safer drugs as far as true pure overdose. 2 But it can cause behaviors and activities that lead to death. Well, that's not what we have here, is it, with Mr. Goode? We don't have him jumping out of a window, for instance, or are off a bridge or some other, or killing himself? We don't have that sort of secondary cause of death secondary to the LSD, do we? 10 Well, the LSD will cause acidosis. The 11 LSD caused him to hallucinate and be delirious causing him to resist and struggle and fight and be combative. And that agitation that resistance in that continued fighting caused more acidosis which would lead to the sudden cardiac arrest. 15 16 Now, Doctor, you know what, you 17 testified in a case in Nashville I believe where you said that the hogtie restraint reduced oxygen 19 consumption and therefore was beneficial to somebody in a state of excited delirium, did you 21 not? That sounds something familiar that I 22 23 would say. Sure. 24 So what you're saying now is

1 diametrically opposed to what you said in the case 2 in Nashville? 3 I don't agree with that. 4 Why don't you? You said that if 5 somebody is hogtied and they can't move their 6 major muscles, then they're their oxygen 7 consumption would go down and that would be 8 beneficial in calming -- in bringing in more 9 oxygen safeguarding the subject; correct? 10 Sure. It was protective of Mr. Goode, 11 the position was decreasing his oxygen demand. 12 And it was keeping him from using his large 13 muscles, but he kept resisting and kept 14 struggling, and that was continuing to cause 15 acidosis. It was less than he would have had had 16 he been using the big muscle groups by moving them 17 more freely. But his agitation and his consistent 18 the struggling and his consistent yelling was all 19 building up more lactic acid. So the position was the best to help him. But unfortunately he kept 21 fighting against it because of the drugs. How did he -- do you agree that 22 23 Mr. Goode was hogtied? 24 That's how I understand it, the hands

1 and the feet were pulled together behind his back. No question about that; right? That's the position I'm operating under as far as what I assume he was in. Ο. And you have defined in your works the hogtie position is having hands bound behind the back, feet bound, knees bent up, and the hands and feet connected by a chain; right? Connected by something. Yes. 10 Ο. And what was the distance between 11 Mr. Goode's hands and feet when he was hogtied? As I understand it, it was probably six to eight inches, something along those range. Maybe a little bit more, maybe a little less. Marijuana played no part in Mr. Goode's 15 Q. 16 death; agreed? 17 A. I wouldn't opine that it did. No. 18 Did you say that Mr. Goode's death was 0. 19 sudden? 20 A. Did I say it was sudden? 21 0. Yes. 22 Α. His cardiac arrest was sudden. Yes.

Define sudden death? How do you define

23

Ο.

24 sudden death?

A. Basically the heart goes into an

- 2 irregular beat and a sudden change in physiology,
- 3 the person goes unconscious, has a few agonal
- 4 respirations, and then is, I guess, dead at that
- 5 point and resuscitated.
- 6 Q. Now when did his heart go into an
- 7 irregular beat?
- 8 A. Around the time where the officer noted
- $\,9\,\,$ that he had calmed down and looked and saw that he
- 10 had turned blue, just prior to that.
- 11 Q. How do you know?
- 12 A. Because up to that point he was verbal
- 13 and saying things and still moving, and then he
- 14 became quiet. And then -- all the cadence of that
- 15 evaluation basically was within a minute or so.
- 16 Q. How do you know?
- 17 A. Based on the testimony.
- 18 Q. Based solely upon the testimony of a
- 19 defendant police officer; correct?
- 20 A. Based on the police officer's reporting,
- 21 sure.

12

20

- Q. With a police officer with no medical
- 23 training; correct?
- 24 A. I don't know the background of his

1 medical training. They usually have some basic

23

25

- 2 life support training. But I don't know the
- 3 specifics of this officer.
- Q. You don't know what happened in the last
- 5 ten minutes of Troy Goode's life, do you, other
- 6 than what the police officer said?
- 7 A. If you're asking if I was in the room,
- no. As I understand though that he was yelling
- 9 and making noises, and those types of things were
- being reported.
- 11 Q. Doctor, we can agree that you weren't in
- 12 the room. My question, so you don't have to
 - eta qualify your answer with that, you can simply say
- 14 the only way -- the only information you have is
- 5 from Officer bag begin; correct?
- 16 A. I believe there was a witness in the
- 17 other room that said he was making noises as well
- 18 from across the hall. So that's somebody else
- 19 saying that he was verbalizing something. But the
- 20 most of the work is from Officer Baggett as far as
- 1 what I understand.
- 22 Q. What witness are you referring to in the
- 23 other room?
- 24 A. I'd have to look her name up. She was

- 1 deposed by -- Janet Tharpe.
- Q. And she said -- tell us what your
- 3 interpretation of Ms. Tharpe's testimony is?
- 4 A. She was saying that she was hearing some
- 5 moaning and some noises that were loud from across
- 6 the hall that she thought were from Mr. Goode.
- 7 Q. She said she was hearing someone yell 8 breathe; correct?
- 9 A. She heard the word breathe as well. But
- 10 she also reflected that she heard some moaning
- 11 going on that was very loud.
 - Q. What did she see when Mr. Goode was
- 13 passed on the gurney within inches of her?
- 14 A. I'm not sure about inches. But he was
- 15 alive and had a very red face apparently and his
- 16 eyes look like they were bugging out.
- 17 Q. And was incapable of movement; correct?
- 18 A. Her report that he was unable to move is
- 19 in a position that look like he couldn't move.
 - Q. Sir, I didn't understand that.
- 21 A. She reported that he appeared to be in a
- 22 position where he couldn't move.
- 23 Q. Well, you know from all of your work of
- 24 hogtying, if you're hogtied you're not going to be

- 1 doing much movement, are you?
 - A. I disagree with that as well. People
 - 3 can roll gurneys over and hogtied and flip over
- 4 and turn if they are so in desire of doing that
- 5 and under the influence of drugs. So they can
- 6 certainly move around a lot. They just can't do a
- 7 lot of flexion and extension of the large muscle
- 8 groups.
- 9 Q. So your testimony is you've known people
- 10 turn over gurneys who were hogtied and represented
- 11 a threat to others?
- 12 A. There's a compound question there. But
- 13 I have known people to flip gurneys over who have
- 14 been restrained. I have also had people get hurt
- .5 by head butting and flipping and stuff like that
- 16 while they're hogtied, sure.
- 17 Q. You -- well, strike that. You have used
- 18 -- can you refer us to any authoritative reliable
- 19 medical text that says that LSD causes death?
- 20 A. If you're asking about in and of itself
- 21 just use of it as a toxic medication -- or drug, I 22 don't believe it cause it by itself. But the
 - B behaviors created by LSD as we talked about
- 24 earlier has been published and caused people to do

Gary Vilke - December 08, 2017

1 things that end up dying.

- Q. Well, we'll talk about this more. But
- 3 tell the jury what drugs are commonly associated
- 4 with excited delirium?
- 5 A. Sure. If you look at the literature
- 6 they refer to cocaine, methamphetamine, PCP.
- 7 There's some data about bath salts now that seems
- 8 to be out there. And LSD is listed as well.
- 9 Q. LSD is virtually unseen in the
- 10 literature, isn't it?
- 11 A. Virtually unseen in the literature
- 12 under --
- 13 Q. In the context of excited delirium?
- 14 A. It is not as common as cocaine and
- 15 methamphetamine.
- 16 Q. Not as common. Cocaine and amphetamine
- 17 account for 99.9 percent of excited delirium
- 18 situations; correct?
- 19 A. I don't know about that number. But
- 20 it's certainly a strong majority of those two
- 21 drugs, yeah.
- 22 Q. You have written that early intervention
- 23 is the best approach to avoiding death in a person
- 24 who is in excited delirium due to drug

- 1 intoxication; correct?
- 2 A. Early intervention is the best way to
- 3 try to avoid sudden death. It doesn't necessarily

27

- 4 prevent it.
 - Q. Well, and you've also written that the
- 6 people who have the opportunity for the earliest
- 7 intervention are the EMTs particularly; right?
- 8 A. They often are the first ones to have a
- medical contact with the patient.
- Q. And they were in this case?
- 11 A. The EMTs were involved in this case.
- 12 Yes.
- 13 Q. And when the EMTs arrived on the scene
- 14 what was Mr. Goode's status?
- 15 A. I believe he was -- actually I don't
- 16 remember still if he was restrained at that point
- 17 or not. But he was agitated, violent, combative.
- 18 And I don't remember if the police actually
- 19 already had him restrained or not at the time of
- 20 their arrival.
- 21 Q. Mr. Goode was no threat to anyone when
- 22 the EMTs arrived; correct?
- 23 A. Just to answer the question I don't
- 24 remember the exact status. But if he was

- 1 restrained, he was certainly less of a threat than
- 2 if he wasn't restrained.
- Q. Well, if the police officers on the
- 4 scene said that he was secure and represented no
- 5 threat, you have no information to the contrary to
- 6 that, do you?
- A. Anybody can be a threat if you're not
- 8 careful around them. But if he is restrained,
- 9 then he would be less of a threat than if he was
- 10 not restrained.
- 11 Q. Doctor, if the police said that Troy
- 12 Goode was no threat by the time the EMTs got
- 13 there, do you have any information to contradict
- 14 that?
- 15 A. Zero threat, I think there is no patient
- 16 that is zero threat, that's what I'm trying to get
- 17 at. If he was restrained then he was a less of a
- 18 threat than if he was not restrained.
- 19 Q. You have also written that a patient in
- 20 an agitated state should have a heart rate monitor
- 21 placed; right?
- 22 A. When feasible, sure.
- 23 Q. Well, it was feasible in this case,
- 24 wasn't it?

- 1 A. There was a point where it could be put 2 on, sure.
- Q. And you've also written that a patient
- 4 in delirium should have constant pulse oximetry;
- 5 correct?
- 6 A. When feasible, sure.
 - Q. Well, pulse oximetry was done in this
- 8 case; right?
- 9 A. It was attempted. Yes.
- 10 Q. No. It was -- there was an assessment
- 11 at the scene by Richard Weatherford. Are you
- 12 aware of that?
- 3 A. There was a scene assessment, sure.
- 14 Q. And are you aware that Mr. Weatherford
- 15 did not record the pulse oximetry that he took?
- 16 A. I did not see a pulse oximetry reading 17 in the pre-hospital record.
- 18 Q. If you do vitals testing you're suppose
- 19 to record the results; right?
- 20 A. If the vital sign testing appears to be
- 21 reliable I would record them. If it seems to be 22 inconsistent or not functioning correctly, I would
- 23 not record them.
- Q. Oh, I see. So if you've got a pulse

1 oximetry reading and you determine that it was not

2 reliable, you just ignore it; is that what you're

3 saying?

A.

- Q. What you would do for good medicine is
- 6 get another reading, wouldn't you, to see if you
- 7 can replicate the result?
- 8 A. If feasible you can, yes. These
- 9 patients are often so agitated or so moving or
- 10 cramped up with the hands with the cuffs that it's
- 11 virtually impossible to get a pulse ox reading.
- 12 And so if you're getting numbers that are very
- 13 inconsistent, then there would be no reason to
- 14 report them because they're not accurate.
- 15 Q. Yes, if you get multiple numbers that
- 16 are inconsistent; right?
- 17 A. Or multiple numbers -- you're putting
- 18 the pulse ox on and you're getting multiple reads
- 19 over time. You don't have to keep taking it off
- 20 and putting it on to actually check to see if it's
- 21 reliable.
- 22 Q. Fine. Was that done?
- 23 A. I don't know.
- Q. It should have been done; correct?

- A. It is something you try to do when the
- 2 person is in the position to be monitored. But if
- 3 they're still struggling and rolling and spinning,
- 4 there is no utility of trying to hook up wires and
- 5 monitors because they just keep falling off give
- 6 you either artifact or unreliable numbers.
- 7 Q. What is your understanding of the size
- 8 of Mr. Goode?
- 9 A. I believe he was six foot, roughly 170 10 pounds.
- 11 Q. Actually he was closer to 150 on his
- 12 driver's license. One seventy was postmortem;
- 13 correct?

16

- 14 A. Which probably is a more accurate 15 weight, but yes.
 - Q. He was bloated? He was full of fluid?
- 17 A. People don't typically gain weight after
- 18 death. Their body weight is their body weight.
- 19 Q. And how many officers were on the scene?
- 20 A. I am not exactly sure. I know there
- 21 were at least three, but I don't remember the 22 exact number.
- 23 Q. How many medics were on the scene?
- 24 A. Same answer, I'm not a hundred percent
- 1 sure how many medics were on the scene. At least
- 2 two, but I don't know.
- 3 Q. Well, assume that there were only
- 4 five -- actually, there were more like eight. But
- 5 are you saying with that manpower present that a
- 6 pulse oximetry could not be obtained?
 - A. I'm saying that people in this state are
- 8 often very difficult to have monitors placed and
- 9 maintained at any functioning status because of
- 10 movement and artifact.
- 11 Q. Well, if that's the case then you've
- 12 also written that the thing to do is to quickly
- 13 medicate; right?
- 14 A. That is one of the things we recommend
- 15 doing for patients who are recognized as being in
- 16 this state.
- 17 Q. Right. So what you do is you use
- 18 chemical restraints to calm the patient down;
- 19 right?
- 20 A. Sedating medication, sure. It's
- 21 semantics.
- Q. Well, no it's not semantics. The center
- 23 says that any drugs administered to effect
- 24 behavioral changes is a chemical restraint, you

- 1 know that?
 - A. There are different levels of chemical

- 3 restrain which is why I try to differentiate
- 4 paralytics or chemical restraint that are used
- 5 often by trauma surgeons. That would not be
- 6 appropriate in this type of case. So when I'm
- 7 using the word -- if you're using the words
- 8 chemical restraints to reflect benzodiazepines or
 9 anti-psychotics to calm somebody, I'm happy to use
- 10 that term.
- 11 Q. No. I was using the Center for Medicaid
- 12 Services. You are aware of that organization,
- 13 aren't you?
- 14 A. I've heard of them. Yes.
- 15 Q. You know it's a federal government
- 16 agency; right?
- 17 A. I haven't really gone into detail what
- 18 they are. But sure it sounds like a government
- 19 agency.
- 20 Q. You know they promulgate regulations
- 21 that are binding on hospitals that accept Medicaid
- 22 or Medicare money; correct?
- 23 A. Again, I haven't looked to their role in
- 24 that kind of detail.

Q. Let's see -- I'm looking at Dr. DiMaio's
Excited Delirium Syndrome: Cause of Death and
Prevention. And I want to read you a brief
section of this about excited delirium. It says

5 acute excited delirium is the section. The quote6 is on initial presentation one cannot determine if

7 the excited delirium is due to intrinsic mental

8 disease or the drugs. In the emergency room one

 $9\,$ has the theoretical advantage that one has access

10 to medications. Since such individuals are

11 virtually always struggling medication has to be

12 given intramuscularly. You agree with that?

13 A. I agree with parts of it, not all of it.

Q. Well, what part do you agree with?

15 A. That -- fortunately I would love to have

16 it in front of me to be able to give you an exact.

17 But we have the advantage of having medications in

18 the emergency department, sure I agree with that.

19 It's often difficult to tell the difference

20 clinically when you're looking at somebody whether

21 it's psychiatrically induced or drug induced.

22 Sometimes they can be very similar, I agree with

23 that.

24

Q. Right. But we don't have any issue

1 about that here, do we, because Mrs. Goode

2 reported the LSD in time?

A. Correct.

Q. So that's not an issue?

A. You just asked me what I agreed with or

35

6 disagree -- you agree with in this thing. I just

7 gave you the parts that I agreed with that I can

8 recall.

Q. I understand. Now do you agree or0 disagree with the statement since such individuals

11 are virtually always struggling medication has to

12 be given intramuscularly; do you agree or

13 disagree?

18

24

36

4 A. I would disagree.

15 Q. Well, the reason Dr. DiMaio, whether you 16 agree with it or not, says intramuscularly the

17 alternative is intravenously; correct?

A. That is one other alternative, sure.

19 Q. And IV is much more difficult to place

20 than sticking somebody in the arm or the butt with

l a needle; right?

22 A. It technically would be considered more 23 challenging than an intramuscular injection, sure.

Q. Right. And Troy Goode had an ID placed

1 by the paramedic; correct?

2 A. Correct.

 ${\tt Q.}$ Which would indicate he was not so out

4 of control that she could not place an IV;

5 correct?

6 A. At the time that she was placing the IV 7 that would seem to be reasonable.

8 Q. Now you have asserted that LSD can cause 9 excited delirium; right?

10 A. I opine that it can, sure.

11 Q. Okay. And it is also true that LSD was

12 in its heyday in the '60s and '70s; correct?

13 A. It was used more frequently then, sure.

14 Q. More frequently. It was used -- do you

15 know who Timothy Leary was?

16 A. I'm sorry?

Q. Do you know who Timothy Leary was at

18 Harvard University?

19 A. The name is familiar. But I couldn't

20 give you any background on it.

21 Q. Well, what's your age?

22 A. I am 51.

23 O. You remember the Grateful Dead?

24 A. Yes.

1 Q. You know all the LSD concerts or all the

concerts where LSD was so prevalent?

A. Absolutely.

Q. Okay. And during the heyday of LSD

5 there were zero reporting deaths due to LSD; you

6 agree?

7 A. I wouldn't have researched that to the

8 point where I could agree or disagree.

9 Q. Okay. So you can't say -- you can't

point to one death in the heyday of LSD that was

11 attributed to LSD toxicity; right?

A. You're talking about toxicity or

13 behaviors associated with the drug?

14 Q. No. I'm not talking about behaviors.

I'm not talking about people going crazy and

16 jumping off buildings. I'm talking about toxicity

17 of the drug.

8 A. I think we talked earlier I don't

19 believe that the LSD is considered a drug that

0 typically is in and of itself a toxic drug that

21 kills based on it's chemistry.

22 Q. And you also agree that in the heyday of

23 LSD use there were zero reported cases of excited

24 delirium attributable to LSD complications;

1 correct? A. In that day the term excited delirium 3 hadn't actually been used. So it wouldn't have 4 been put out there. That came out more in the 5 times of the cocaine, heroin, they were seeing 6 more deaths associated with it. Q. Actually the excited delirium or 8 agitated excited delirium deaths had been reported 9 back into the 19th Century in psychiatric 10 patients; correct?

11 Right. But you used the one term I 12 think excited delirium, and that term wasn't 13 really being used until the '80s. So you wouldn't 14 expect to go and see LSD deaths secondary to

15 excited delirium in the '60s or '70s. It wouldn't 16 have been treated then.

Q. Fair enough. In the '60s and '70s, did 17 18 you see one death attributable to agitated

19 delirium caused by LSD, one death? 20 I didn't review the literature from the

21 '60s and '70s. I know that since -- Ronald 22 O'Halloran I believe reports of a death secondary

23 to LSD and excited delirium in his case theories.

Ronald O'Halloran is a forensic

1 of excited delirium like presentations in the late 2 1800s and early 1900s were noted in the medical

3 literature?

24

Α. Bell's mania and other names of it 5 describe the subjects or patients presenting with 6 symptoms consistent with excited delirium in that 7 time period. Yes.

And going on quoting: At this time the 9 reports of death from this syndrome started fading 10 coinciding with the introduction of

11 anti-psychotics for the treatment of agitated 12 patients in psychiatric facilities. Right?

The reports did start to go down because 14 people were being treated with medications. Sure.

15 And they were down at the time that LSD 0.

16 came on the scene? 17 Α. I guess in that time period, yes the

18 psychiatric patients were being treated with 19 Thorazine and other anti-psychotics. And that was 20 the same time period that LSD was out there.

21 Sure.

22 Q. You've stated that in your -- to your 23 understanding Mr. Goode was hogtied; correct? 24

A. Yes. He was in a prone maximal

1 pathologist?

A. That is correct.

And Dr. O'Halloran has publicly stated 4 that if hogtying in a prone position has nothing 5 to do with the death of people under the influence of drugs, why does it always occur when those

39

41

people are in police custody; correct?

Why does it meaning the death or the --

Dr. O'Halloran has publicly stated that all deaths in hogtie restraints in excited

delirium from drugs occur in police custody? 11 He may have claimed that. I would 12

disagree with it. 13

14 Okay. Now, Doctor, you do agree that when cocaine came on the scene in the 1980s and thereafter is when we saw the excited delirium deaths attributable to ingestion of that particular drug; right? 18

19 Α. That's the time period. Yes.

20 Ο. And cocaine and amphetamines are 21 stimulants; right?

They are stimulants. Yes.

23 Is it correct that in Dr. Gall's,

24 G-A-L-L, forensic medicine that the descriptions

1 restraint position, also known as hogtie.

How long did he stay in that position?

He was in it from the time the police 4 officers put him in until the time he had his cardiac arrest. And that was somewhere about an

6 hour and a half in that range.

Is it correct that people who are in a delusional state of excited delirium do not 9 appreciate their surroundings?

10 They are often altered by their surroundings. They see things. They hear things. What they interpret from their surroundings is often unknown because of what's going on in their 14 head.

15 Is it correct that these people are not 16 aware of their condition of delusional state?

17 They typically don't recognize that they're delusional if that's what you're asking. They are just experiencing it. But they don't 20 have an awareness of that delusion.

21 Certainly they don't know what they are 0. 22 doing; right?

23 That is usually felt to be the case, 24 yeah. They're unaware of what they're doing,

15

1 their activities. Sure.

Q. They are unaware of being bound also;

3 correct?

They may realize they can't move. They

5 may not know why or -- again, what's going on in

6 their head with the drugs that are sort of

7 swimming around and causing confusion and delusion

8 is hard to say in every case it's the same way.

Well, you would agree that it would be 10 unlikely that somebody in an extreme delusional

11 state would know that he had been chained; right?

It's possible that they sense something 12

13 going on that somebody is holding them or

14 dragging, holding them or -- it's hard to say

15 what's happening. But they may recognize that

16 they can't move. They may not recognize they

17 can't move. Again, I think it's they're -- what's

18 going on in their head is very difficult. But

19 they may or may not be aware specifically.

20 Well, the state which you describe as 21 excited delirium would be so extreme that a person

22 would be highly unlikely to realize that he was in

23 handcuffs, for instance?

24 He may not recognize it was handcuffs.

42 1 He may recognize that the devil is holding him or

2 other things. Again, that's sort of the part of

3 delusional stuff. He hey not know exactly what's

going on, but he has probably some awareness. He

recognizes -- they recognize people coming at them

6 because they get paranoid and freak out. So there

7 is a level of awareness. But how detailed that is

8 or how accurate that is is really difficult for

anybody to understand on all cases. It's usually

more case individual.

11 Q. You wouldn't expect a person in extreme 12 excited delirium to yell out get me out of these

chains, would you?

Α. They could. Sure.

> How would they know they were in chains? Q.

16 They could be aware of it. They could

17 have seen it. They could be heard jingling. They

could be sensing the sounds, the feel. Again,

it's a delusion. It's not -- it can wax and wane

to some degree. But the reality is the level of

awareness that is happening vary from people to

people. I have seen all kinds of variations on

how they seem to -- how they seem to interpret

24 their environment and surroundings.

So what you're telling the jury is that 2 there is no checklist as such for determining a

3 person that is in excited delirium?

I don't think I said that. I said that

5 you can't completely define what they are

6 interpreting their environment to be. There have

7 been some people who say shoot me shoot me making

8 an awareness that there might be a gun with the

9 officer there. So there's different levels of 10 awareness. But it doesn't mean that they are not

11 delirious and interpreting their environment and

12 what's going on correctly.

20

13 Very well. Let me ask you -- let's put

14 that aside. When a person presents with these

15 markers or these characteristics as you said of

16 excited delirium and medical care arrives, that

17 person in a state of excited delirium syndrome

18 should receive pulse oximetry; correct?

19 When feasible, sure. It's reasonable.

And when is not feasible?

When they're moving so much that they

22 can't either get a good tracing or it keeps

23 falling off. You don't put something on somebody

24 that is either grabbing the wires or can't keep it

1 on their fingers. A lot of times in an acute

agitated state people try to put it on but in

45

3 general it ends up getting pulled off just by

virtue of the movement.

Ο. For the jury's benefit there are

6 different types of pulse oximeters; is that

correct?

There's different types of attachments

if that's what you're getting at.

Q. Right. One can go around the head;

11 correct?

10

12 A. For pediatrics. We don't typically use

that in adults.

14 Well, Baptist Hospital does. Would you 0.

15 argue with that?

16 I'm not aware of it. So I couldn't say

17 one way or the another. But if his head was down

on the ground it probably would not be as

functional because of the movement and things like

20 that. But I can't say that they did or didn't try

21 it.

Well, if you place a pulse oximetry 22

around the head it's not going to come -- be

24 shaken off by somebody in hogtie; right?

1 A. It certainly could be. Sure.
2 Q. Doctor, you understand that your

3 opinions is suppose to be to a reasonable degree

- 4 of medical certainty; right?
- A. Absolutely.
- ${\tt Q.}\quad {\tt So} \ {\tt all} \ {\tt of} \ {\tt this} \ {\tt could} \ {\tt be}, \ {\tt and} \ {\tt may} \ {\tt be}, \ {\tt and}$
- 7 these hypotheticals you understand are not
- 8 acceptable testimony; correct?
- 9 A. If you're asking me questions I'm giving 10 you the answers to those questions.
- 11 Q. Has your testimony ever been excluded
- 12 from a case? Have you ever been excluded, your
- 13 testimony in whole or in part from any litigation?
- 14 A. Not to my knowledge. No.
- 15 Q. Did you testify in the case of Rich
- 16 versus the City of Savannah Tennessee?
- 17 A. I believe I did. Yes.
- 18 Q. And the United States magistrate judge
- 19 in that case held that you did not have the
- 20 expertise to offer some of the opinions you tried
- 21 to offer?
- 22 A. I was not made aware of that.
- 23 Q. In that case you were hired by the
- 24 police after a man died in a confrontation with

1 the police?

- A. That case is a long time ago. So I
- 3 don't remember details of it. That certainly
- 4 could be the case.
- Q. You attempted to testify that the cause

47

49

- 6 of death was not related to asphyxia in Rich
- 7 versus City of Savannah; right?
- 8 A. Again, it's been a long time since I've
- 9 reviewed that case. But it certainly would be
- 10 possible.

11

- 12 MR. EDWARDS: Bobbie, let's mark as the
- 13 next exhibit -- Bobbie, if you will, hold the
- 14 second exhibit for the order of Judge Pham in the
- 15 case of City of Savannah.

Q. Okay.

- 16 THE REPORTER: I've done it.
- 17 Mr. Edwards.
- 18 MR. EDWARDS: Okay.
- 19 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 20 WAS MARKED AS EXHIBIT NO. 2 TO THE TESTIMONY OF
- 21 THE WITNESS AND ATTACHED HERETO.)
- 22 BY MR. EDWARDS:
- Q. Doctor, take a look at that order and
- 24 tell us that you were aware of the fact that Judge

48

- 1 Pham excluded much of your testimony in the case
- 2 of Rich versus City of Savannah?
- 3 MR. GASS: Can I have the date the
- 4 decision that's being referenced.
- 5 MR. PHILLIPS: I think it's September
- 6 30, 2005.
- 7 MR. EDWARDS: That is correct.
- 8 THE WITNESS: All right. Thank you.
- 9 BY MR. EDWARDS:
- 10 Q. Have you seen this order before?
- 11 A. I have not. No.
- 12 Q. Okay. So you were unaware that a
- 13 federal judge here in Memphis had excluded some of
- 14 your opinions?
- 15 A. I was unaware of a federal judge like
- 16 this. When I go to court they tell me the areas
- 17 they want me to talk about. So it could have been
- 18 that that's what happened here. But I was not
- 19 aware of this order.
- 20 Q. Fair enough. Now I was asking you about
- 21 the things that should be done medically when a
- 22 patient presents in a altered mental status like
- 23 Mr. Goode. We talked about pulse oximetry is
- 24 another thing which the paramedic should assess is 24

- 1 for head trauma?
 - A. You'll do an assessment of the patient
- 3 the best you can. That's part of an evaluation.
- 4 Sure.
- 5 Q. Right. Head trauma would be included in
- 6 assessing the patient?
- 7 A. If feasible, sure you'll evaluate what
- 8 you can with what you have in front of you. But
- 9 that's part of an assessment, sure.
- 10 Q. Well, why would somebody being hogtied
- 11 not be able to have the condition of his head
- 12 assessed?
- .3 A. Sometimes you can't see the entire
- 14 portion of the head. Sometimes you can depending
- 15 on their positioning. With the agitation
- 6 component you're not trying to completely disrupt
- 7 and move around and create a lot of stimuli.
- 18 You're trying to observe and evaluate, but you're
- 19 not going to completely necessarily take off every
- 20 piece of clothing to get a good assessment.
- 21 You'll look -- based on the history on what you
- 22 can see visually and look at somebody.
 - O. Did Mr. Goode have a hat on?
- 4 A. I don't know. I don't believe he did.

- Q. Another thing that should be done
- 2 according to you is a glucose check; right?
- 3 A. At some point a glucose should be 4 checked. Yes.
- Q. Okay. And what is it that glucose
- 6 levels would tell you as a physician?
- 7 A. If they're very low that could be an
- 8 etiology for the agitation, or extremely high it
- 9 could be another medical condition, but probably
- 10 not the cause of the agitation, but could be.
- 11 Q. Was a glucose check done on Mr. Goode?
- 12 A. It was. Yes.
- 13 O. Postmortem?
- 14 A. I don't think so. I thought it was done 15 prior to his death.
- 16 Q. You have the medical records there and
- 17 the EMT records; correct?
- 18 A. Yes.
- 20 prior to death by either the paramedics or the
- 21 hospital personnel in the emergency department?
- 22 A. There's a bedside glucose noted 2139 of
- 23 95.
- 0. That's 17 minutes after the code was

- 1 called; right?
 - A. That would be --
 - Q. He was dead?
 - 4 A. Well --
 - Q. He was dead at that point?
 - 6 A. You asked me -- he wasn't pronounced
 - 7 dead until later than that. I'm sorry, I
 - 8 misunderstood your question. If you're asking was

51

53

- 9 there a glucose done prior to his cardiac arrest,
- 10 I don't believe it was done prior to his cardiac
- 11 arrest.
- 12 Q. Either by the EMS or the hospital
- 13 personnel; correct?
- 14 A. Not that I am aware of. A chemistry
- 15 test is ordered prior to his cardiac arrest. But
- 16 a bedside glucose was not done until the time we
- 17 just talked about.
- 18 Q. Tell the jury what's involved in doing a
- 19 glucose check?

23

52

- 20 A. Typically it's poking the finger with
- 21 some sharp object, a prong or what not getting
- 22 some blood sample and putting into a machine.
 - Q. Right there at bedside?
- 24 A. Can be done right at the bedside. Yes.
- Q. I mean, it's a very simple procedure,
- 2 isn't it?
- 3 A. Basically, yes it's fairly simple.
- 4 Q. It is an essential part of the
- 5 examination, the medical examination of a person
- 6 deemed to be in excited delirium; correct?
 - A. It is part of the evaluation in somebody
- 8 presenting in excited delirium, particularly if
- 9 there's not an inciting cause. But it's not -- I
- 10 wouldn't call it essential.
- 11 Q. Have you listed that -- you, Dr. Vilke
- 12 listed glucose check as part of the exam of a
- 13 person exhibiting the symptoms of Troy Goode?
- 14 A. I have said that you should check a
- 15 bedside glucose. Yes.
- 16 Q. ECG is another thing that should be
- 17 done; right?
- 18 A. ECG as a 12-lead EKG or cardiac
- 19 monitoring?
- 20 Q. Either one. Was an ECG done in this
- 21 case?
- 22 A. There was a three lead done in the
- 23 field. Yes.
- Q. And Lead 2 is the one that tells you

- 1 whether somebody is in supraventricular
- 2 tachycardia; correct?
- 3 A. It's not necessarily a specific lead.
- 4 You look at certain leads that give you the best
- 5 reading.
- 6 O. Lead 2 is the one mentioned in the
- literature for determining SVT, supraventricular
- 8 tachycardia?
- 9 A. It can be used to look for SVT. But you
- 0 cannot always tell whether somebody is an SVT
- 11 based on a single lead tracing. Sometimes you
- 12 need a 12 lead.
- 13 Q. Yeah. Well, if you need a 12 lead then
- 14 you do a 12 lead; right?
 - A. That would be correct.
- 16 Q. Was a 12 lead done?
- 17 A. It was not done in this case. No.
- 18 Q. It should have been done if there was
- 19 any question about the diagnosis of SVT made by
- 20 Paramedic Graham; correct?
- 21 A. There is no doubt about the diagnosis
- 22 it's not SVT. But in this case even if you wanted
- 23 to get a 12 lead, it would have been impossible
- 24 based on his behavior.

54

1 Q. Were you there, Doctor?

A. I was not there.

- Q. Nurse Graham was able to get in -- I'm
- 4 sorry, Paramedic Graham was able to get in an IV
- 5 but she couldn't do an adequate ECG; is that what
- 6 you're saying?
- 7 A. Being specific she got an ECG a single
- 8 lead tracing. It would not be feasible to do a
- 9 12-lead EKG the way that Mr. Goode was described 10 as behaving.
- 11 Q. So it was okay for the paramedics and
- 12 the hospital to disregard the finding which is
- 13 recorded of SVT, that's good medicine? We're just
- 14 going to disregard it because we don't think it's
- 15 accurate; is that what you're saying?
- 16 A. The paramedic recorded SVT. The rhythm
- 17 strip does not show SVT. So there was no SVT to
- 18 disregard even though it was documented in the
- 19 paramedic record.
- 20 Q. Is it good medicine to disregard a
- 21 diagnosis without verifying that the diagnosis is
- 22 incorrect is my question?
- 23 A. Correct, paramedics do not make
- 24 diagnosis. They do assessments. So there was no

- 1 official diagnosis of SVT being made. They
- 2 interpreted rhythm as being potential SVT. But
- 3 there was no diagnosis of SVT in this case.
- Q. Did she record SVT?
 - A. That is what she wrote in her record.

55

- 6 Q. The paramedic wrote not once but twice
- 7 SVT; right?
 - A. As the monitor, not as a diagnosis.
 - Q. Okay. And then so it was okay for the
- 10 hospital, the emergency department to disregard 11 that?
- 12 A. I don't believe the tachycardia was
- 13 disregarded by the hospital. They recognized --
- 14 Q. It wasn't?
- 15 A. They recognized that he was tachycardic
- 16 and they started therapy for that, which was the
- 17 sedation to slow his heart rate down.
- 18 Q. How quickly was sedation commenced at
- 19 the hospital?
- 20 A. Shortly after the physician was able to
- 21 evaluate the patient, it was ordered and
- 22 commenced.

56

- Q. How long was that after he arrived at
- 24 the hospital?

He arrived at 2028. The order was

- 2 placed approximately 2106.
- 3 Q. So 36 minutes later?
- 4 A. That looks about correct. Yes.
- 5 Q. And it's also correct you -- you're an
- 6 emergency physician; correct?
- 7 A. Iam. Yes.
- 8 Q. You have worked in emergency
- 9 departments; right?
- 10 A. Yes.
- 11 Q. Triage nurses can sedate people in Troy
- 12 Goode's position; correct?
- 13 A. Can sedate them in his condition?
- 14 Q. Yeah
- 15 A. Not at our hospital, not without an
- 16 order.
- 17 Q. Sure. But if they a triage nurse
- 18 determines that a patient is in excited delirium,
- 19 they can simply ask the doctor for permission to
- 20 administer something like Versed, for instance?
- 21 A. A nurse can make a request. But a
- 22 doctor is typically not going to do anything until
- 23 they get some evaluation of the patient. Usually
- 24 you want to see what's going on, get some history,

- 1 get an assessment, vital signs the best you can
 - 2 before you start throwing meds at somebody. So a
 - 3 triage nurse can request it, doesn't mean they're
 - 4 going to get it.
 - Q. How do you get the history?
 - 6 A. From the collateral history --
 - Q. Of a patient that's delirious?
 - A. I'm sorry, you interrupted me. I was
 - 9 saying the collateral history is helpful from
 - 10 either the EMTs or law enforcement that are
 - 11 accompanying them or the patient obviously if they
 - 12 can. In this case no.
 - 13 Q. As a matter of fact EMTs or paramedics
 - 14 can administer chemical restraints such as Versed
 - 15 in an ambulance if they deem it necessary; right?
 - 16 A. If the protocols allow and they meet
 - 17 criteria, there are certainly places that allow
 - 18 for sedation to be used by paramedics.
 - 19 Q. Mississippi does; correct?
 - A. I don't know the protocols for
 - 21 Mississippi.
 - Q. Assume that the Mississippi protocols
 - 3 allow the paramedic to administer a chemical
 - 24 restraint like Versed, obviously Ms. Graham didn't

1 deem it necessary to sedate Mr. Goode; correct?

- A. Just because protocols allow for
- 3 something, you have to follow the protocol. I
- 4 don't know the protocol, so I can't say whether or
- 5 not it would have been appropriate or
- 6 inappropriate to do it. I wasn't asked to review
- 7 the paramedic's care in this case.
- 8 Q. Well, you supervise paramedics; right?
- 9 A. I have. Yes.
- 10 Q. And you're qualified to speak about
- 11 paramedics; right?
- 12 A. I have been qualified, sure.
- 13 Q. And you know that paramedics if the
- 14 circumstances require can administer chemical
- 15 restraints in an ambulance; correct?
- 16 A. The word require is a strong word.
- 17 Again, if protocols allow for it and they meet
- 18 certain criteria and they don't meet certain
- 19 exclusion criteria and their training and all that
- 20 goes with it, then yes. Like I said, there are
- 21 certain places that paramedics can gave
- 22 medications for agitated patients. I don't know
- 23 the protocols here. I wasn't asked to evaluate
- 24 their treatment of Mr. Goode.

- 1 Q. And an agitated patient who is agitated
 - 2 due to LSD is a proper subject for a chemical
 - 3 restraint if he is truly out of control; correct?

59

61

- A. A person who is extremely agitated on
- 5 any illicit drug can be a candidate for sedation
- in the appropriate setting with the appropriate
- 7 background and history and depending on who is
- 8 giving it which protocols and certain requirements
- 9 are required before giving the medication.
- 10 Q. So you don't know what the Mississippi
- 11 protocol says one way or another?
- 12 A. That's correct.
 - Q. Okay. Now was Troy Goode an emergency?
- 14 A. I'm sorry, was he an emergency?
 - Q. Yes. Was he considered an emergency
- 16 patient?

13

15

24

60

- 17 A. We can consider this state a medical
- 18 emergency for evaluation, sure. Compared to a cut
- 19 or an ankle strain it's considered a medical
- 20 emergency, sure.
- 21 Q. And for emergency patients it is
- 22 protocol to get them to the hospital as quickly as
 - 3 possible; right?
 - A. As quickly and as safely as possible.

1 That's one of the goals, sure.

- Q. What you do is if -- for EMS what they
- 3 do is they turn on the ambulance lights so that
- 4 they can be an emergency vehicle; correct?
- 5 A. They can do it. Because of the risks
- 6 associated with going fast lights and sirens
- 7 there's lots of tiers in which -- even though the
- 8 patient may be deemed a quote unquote emergency,
- 9 you would still not go lights and sirens.
- 10 Somebody with severe abdominal pain and a
- 11 borderline heart rate and blood pressure would be
- 12 an emergency, but you wouldn't go lights and
- 13 sirens to get them to the hospital. So the
- 14 protocol for lights and sirens vary from area to
- 15 area.
- 16 Q. Okay. So why don't we cut out some of
- 17 this. We're not talking about people with
- 18 abdominal problems. We're talking -- we're here
- 19 about excited delirium; okay?
- 20 A. Okay.
- 21 Q. Is an excited delirium patient such as
- 22 Mr. Goode considered a medical emergency; yes or
- 23 no?
- 24 A. The answer is we consider it a medical

1 emergency, sure.

- Q. And a medical emergency is to be
- transferred emergently to the hospital; correct?
 - A. Emergently or urgently. Again, if
- 5 you're defining emergently by lights and sirens, I
- 6 would not agree with that. I think they should go
- 7 as quickly and safely as possible without the
- 8 necessary need for lights and sirens in these
- cases.
- 10 Q. You would certainly not sit for a number 11 of minutes in the parking lot with the patient in
- .2 the back taking no action, would you?
- in the basic carring no accion, weard you.
- 13 A. I think that I -- I think that as far as
- 14 no action you're doing nothing versus assessing
- 15 and doing other things, you're asking me questions16 about the case I really didn't review.
- 17 Q. Well, Doctor, look, you're coming in to
- 18 testify about cause of death; right?
- 19 A. Yes
- 20 Q. And don't you think it's important that
- 21 you have all of the facts leading up to the death
- 22 so you can render a valid opinion?
- 23 A. The facts that are applicable to
- 24 determine the cause of death, sure. What's being

1 done in the back of an ambulance during a period

- 2 of time is not applicable to determining cause of
- 3 death. Whether they were poking him with an IV,
- 4 doing an assessment, trying to get a pulse ox,
- 5 trying to put a lead on, or what you said doing
- 6 nothing, that doesn't apply to my determination of
- 7 cause of death. I have the times down that things
- 8 were going on, but not the necessary specific
- 9 second to second or minute to minute play by play
- 10 in the back of the ambulance.
- 11 Q. Does weight applied to Mr. Goode's back
- 12 when he was hogtied and prone have any impact on
- 13 your opinion?
- 14 A. At the time in the hospital or when are 15 you referring to?
- 16 Q. At any point in time.
- 17 A. In the case of his -- in looking at the
- 18 -- assessing the whole case, the answer would be
- 19 if weight was applied during the restraint process
- 20 by police, the fact that he was alive the next
- 21 hour plus, hour and a half plus, that would not
- 22 have any impact on my opinion as far as did the
- 23 weight have any causation to the cardiac arrest.
- 24 The straps are being used in the back of the
- 64

24

- 1 any one time?
- 2 A. In the hospital there really wasn't much
- 3 weight at all on him at all. He was left on the
- 4 gurney. In the back of the ambulance he had some
- 5 straps on him. The weight that was used to try to
- 6 get him in custody by police was varying and moved
- 7 around. But the reality is the fact that they --
- 8 after he was restrained he was assessed by
- 9 paramedics and assessed at the hospital and had a
- 10 blood pressure and a heart rate and was alive and
- 11 yelling and streaming. No matter what that weight
- 12 was, it wouldn't have impacted his outcome. It
- 13 wouldn't be part of his cardiac arrest.
- 14 Q. How many police put their weight on
- 15 Mr. Goode at the scene?
- 16 A. I seem to recall about intermittently
- 17 three police officers were back and forth. I
- 18 couldn't give you an exact time or amount.
- 19 Q. Do you believe that in a drug induced
- 20 excited delirium state where there is death, the
- 21 death is preceded by cycle of alternating struggle
- 22 and collapse?
- 23 A. I'm sorry, could you repeat that again,
- 24 please?

- 1 ambulance if they were there and he got to the
 - 2 hospital and they were removed and he was still
 - 3 alive and kicking and struggling and showing signs

63

- 4 of life and good vital signs -- or not good vital
- 5 signs, but positive vital signs, that would not
- 6 impact my opinion. I note it, but it wouldn't
- 7 impact my opinion.
- Q. Have you not seen cases where there was9 a delayed asphyxiation death after application of
-) weight?

11

12

- A. A delayed asphyxiation death after the application of weight?
- 13 Q. Was there not a reported -- excuse me,
- 14 was there not a reported case of death two days
- 15 after application of weight due to asphyxiation?
- 16 A. I would be happy to review that. If 17 you're referring to somebody who had a cardiac
- .7 you're referring to somebody who had a cardiac
- 18 arrest at the time and was asphyxiated and died in 19 the hospital two days later, I guess that's a
- 20 feasible thing. But as far as somebody who had
- 1 weight on them and then they had their cardiac
- 22 arrest event two days later, I would certainly not
- 23 think that the weight had an impact on that.
 - Q. How much weight was put on Mr. Goode at
- 64 | 1 Q. Yes. Is death in these circumstances
 - 2 preceded by alternating cycle of alternating
 - 3 struggle and collapse?
 - 4 A. I would not say that that's necessarily
 - 5 uniform, no. I think it's thought of struggle,
 - 6 struggle, struggle. And then they have a cardiac
 - 7 arrest is typically what you see, not necessarily
 - 3 an alternating pattern.
 - 9 Q. Let me give you a quote. "Death is
 - 10 preceded by a cycle of alternating struggle and
 - 11 collapse." Agree or disagree?
 - .2 A. I can't interpret that sentence. If
 - 13 you're talking about collapse as far as physical
 - 14 exhaustion versus cardiac collapse or
 - 15 cardiovascular collapse, I'm not sure what the
 - 16 context is there.
 - Q. I'm just quoting Dr. DiMaio.
 - 18 A. You're giving me one sentence. So
 - 19 again, I'm not sure what he means by collapse. So
 - 20 I can't interpret that sentence.
 - 21 Q. That's the whole sentence. That's all I
 - 22 can give you. Was Mr. Goode ever bradycardic?
 - 23 A. Not that I recall being -- during the
 - 24 time before he had his cardiac arrest, he was not.

66 67 I can't say -- he certainly was not 1 How do you know was he monitored? He was -- you mean as far as on a 2 documented as bradycardic. His behavior would 3 cardiac monitor, not consistently, no. 3 very consistent with bradycardic. But I can't say Was he monitored at all? for the exact time he was in the hospital prior to 5 Well, yeah. We have his rhythm strips. his cardiac arrest that he was not bradycardic. 6 We know he was on a monitor for at least a small Q. Can hypoxia cause cardiac arrest? 7 window of period to get that rhythm strip, but he 7 Α. Hypoxia can cause cardiac arrest. Yes. 8 was not --Q. When did Mr. Goode's -- was he Q. Is that in the hospital record or the dysrhythmic? 10 EMT record? He was tachycardic, which is some define 11 A. as a dysrhythmia. And he obviously went into PEA The EMT record. No, Doctor. At the hospital where he which was a dysrhythmic event. 12 13 was there for an hour or so, was he ever monitored When did he become dysrhythmic? 13 14 for cardiac rhythm? A. Well, again --15 Sorry to upset you, I was just asking 15 Q. Can you tell us? 16 answering your question was he ever monitored, so 16 If we're defining tachycardia as a 17 dysrhythmia he was dysrhythmic the entire time. 17 we're at the hospital now. And he had pulse It's an irregular rhythm. It's not a normal sinus 18 checked but he was not on a cardiac monitor prior rhythm. It's a sinus tachycardia. 19 to his cardiac arrest. He was monitored obviously 19 20 after the cardiac arrest. What you do medically to address 0. 21 But that doesn't do much good, does it? dysrhythmia is what? Just answering your question. You treat what you feel to be the cause 22 22 23 So you can't say whether he was ever 23 of that dysrhythmia. 24 bradycardic or not; right? 24 Q. And I'm asking you what that is? 68 Well, in this case it was a sinus THE WITNESS: Would this be a good place tachycardia --2 to take a quick break? 3 The treatment what was the treatment? MR. EDWARDS: Sure. Q. 4 Α. Sure. THE VIDEOGRAPHER: Time off the record Q. That should apply? is 9:22 a.m. In this case it was a sinus tachycardia 6 (WHEREUPON, A BREAK WAS TAKEN AND THE 7 most interpreted to be due to drug use and PROCEEDINGS CONTINUED AS FOLLOWS:) agitation. So you treat that by starting sedation THE VIDEOGRAPHER: Time back on the medication to try to calm the person down, lower record is 9:30 a.m. This begins Media No. 2. 10 the heart rate based on that. Counsel, you may proceed. 10 Actually you've testified that when you BY MR. EDWARDS: 11 11 12 have people come in to your emergency department Doctor, shifting to another subject, we 13 under the influence of LSD you often just put them talked about chemical sedations, chemical over in the corner until they calm down; right? restraints. Haloperidol is a chemical restraint; 15 Depends on what their presentation style 15 correct? 16 is. As you alluded to there's all kinds of 16 It's a medication used to sedate people. 17 presentations to LSD intoxication. If they're 17 It can be considered a chemical restraint. just mellow and tripping, then yeah you can watch 18 And was Haloperidol used on Mr. Goode? 0. them without a monitor in a corner somewhere. If 19 Α. It was. Yes.

24 Possible and reasonable, sure.

22

23 medication?

20 they're extremely agitated, then you're going to

As quickly as possible for the sedation

21 try to use sedating medications to calm them.

20

22

23

21 that correct?

Α.

And it was inserted through an IV; is

That's how it was administered. Yes.

You are aware that the FDA issued a

24 black box warning against IV Haloperidol use?

7

23

1 A. There was a warning out for Haldol use.

- Q. And it's because there were deaths
- 3 experienced after IV administration of Haldol or
- 4 Haloperidol; correct?
- A. There were some reported deaths. Yes.
- 6 Q. So the way Dr. Oliver ordered the
- 7 administration of Haldol was against the warning
- 8 from the FDA; right?
- 9 A. Well, the warning is to be aware that
- 10 this can happen. It's still the commonly used
- 11 medication in the emergency departments across the
- 12 U.S.
- 13 Q. And if you're going to do that then you
- 14 need to monitor the patient after you inject it;
- 15 right?
- 16 A. After you put the medication in there
- 17 and as soon as you start monitoring you would
- 18 watch the patient. Yes.
- 19 Q. And why do you -- tell the jury why it
- 20 is after you administer Haldol or Haloperidol that
- 21 you must watch the patient?
- 22 A. The black box warning basically says
- 23 there is a few cases out of literally millions of
- 24 administrations of Haldol that caused torsade de

- 1 pointes, it's specific dysrhythmia that can kill
- 2 somebody. And so you're going to watch to make
- 3 sure if they go into it you're ready to treat it.
- Q. It's more than that, isn't it? If you
- administer Haldol it can change -- it can affect
- 6 breathing; correct?
 - A. It can affect, I'm sorry, what?
 - Q. Breathing?
- 9 A. Haloperidol? It's usually not
- 10 considered something that would impede
- 11 ventilations. It's a sedating medication, but
- 12 it's usually not considered significantly
- 13 ventilatory involved.
- 14 Q. Can it change respiration?
- 5 A. If it sedates somebody who is breathing
- 16 quickly because they're agitated, then sure your
- 17 respiratory rate might decrease. But it wouldn't
- 18 change your ventilations.
- 19 Q. Well, one of the things that people who
- 20 are trained to do observation of patients that
- 21 have received chemical restraints is look for
- 22 changes in respirations; right?
 - A. You're looking for -- you're following

- 24 their breathing patterns, sure. That's fair.
- 1 Q. All right. And you're also looking for
- 2 changes in heart rate?
- 3 A. At some point when you can monitor them
- 4 you would reassess them for the sedating
- 5 qualities. It should lower the heart rate.
- 6 That's part of the purpose of using the medicine,
- 7 sure.
- 8 Q. By the way, was Mr. Goode's heart rate
- 9 measured either by the EMS or the medical
- 10 personnel at the hospital?
- 11 A. It was. Yes.
- 12 Q. And -- I asked the wrong question. Was
- 13 his blood pressure taken?
- 14 A. It was taken. Yes.
- $\ensuremath{\text{15}}$ Q. And what import, if any, that there was
- 16 a 30 point drop in the diastolic within a few
- 17 minutes?
- 18 A. Physiologically and clinically it
- 19 wouldn't have changed anything. The measurements
- 20 in these types of patients sort of bounce around.
- 21 And you measure, you know, five blood pressures
- 22 you're going to get five different numbers, and
- 23 they could be variable 20, 30 points depending on
- 23 they could be variable 20, 30 points depending to
- 24 what's going on there.

- 1 Q. Well, once again the only way to know
- 2 that is by continuing to monitor; correct?
- 3 A. If you wanted to recheck the blood
- 4 pressure multiple times, sure. That's how you
- 5 would do that.
- 6 Q. And that was not done with Mr. Goode
- 7 either, was it?
- 8 A. He had several blood pressures checked
- 9 during his time.
- 10 Q. He had two blood pressures in the
- 11 ambulance, but then his blood pressure was not
- 12 monitored at the hospital; correct?
- 13 A. I believe it was checked at the
- 14 hospital.
- 15 Q. You want to show us -- it was measured
- 16 at 164 at one point; right?
- 17 A. His heart rate I think was 164. His
- 18 blood pressure was not that obviously.
- 19 Q. His blood pressure was normal?
- 20 A. That is what I recall.
- 21 Q. All right. Is it accurate that --
- 22 MR. EDWARDS: Well, first of all, let's
- 23 mark the FDA black box.
- 4 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

1 WAS MARKED AS EXHIBIT NO. 3 TO THE TESTIMONY OF

- 2 THE WITNESS AND IS ATTACHED HERETO.)
- 3 BY MR. EDWARDS:
- 4 Q. Doctor, have studies Shown that more
- 5 than half of patients develop respiratory
- 6 depression in response to chemical restraints?
- 7 A. Have half the studies shown?
- 8 Q. No. Listen to the question. Have there
- 9 been studies, peer reviewed studies, publications
- 10 that have shown that more than half of patients
- 11 develop respiratory depression in response to
- 12 chemical restraints?
- 13 A. I know the patients will breathe less
- 14 than when they're agitated. So their ventilations
- 15 and respirations have been depressed from their
- 16 starting point. So that would make sense. It's
- 17 part of the sedation process.
- 18 Q. Are you familiar with the work of
- 19 Dr. Deitch, D-E-I-T-C-H, from two years ago on
- 20 unrecognized hypoxia and respiratory depression in
- 21 emergency department patients sedated for
- 22 psychomotor agitation?
- 23 A. I am not familiar off the top of my head
- 24 based on that title and author.

- 75
 1 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 2 WAS MARKED AS EXHIBIT NO. 4 TO THE TESTIMONY OF
- 3 THE WITNESS AND IS ATTACHED HERETO.)
- 4 BY MR. EDWARDS:
- Q. Doctor, are you saying you're not
- 6 familiar with this?
- 7 A. May have reviewed it at some point. I'm
- B not familiar with the details of it right now.
- Q. Okay. It was published in Western
- 10 Journal of Emergency Medicine; correct?
- 11 A. That is correct.
- 12 O. Is that a reliable source for medical
- 13 information?
- 14 A. It is a peer reviewed journal.
 - Q. So is your answer yes it's deemed
- 16 reliable?

21

76

- 17 A. It's as reliable as the peer review is
- 18 reviewing it. That's what I'm getting at.
- 19 Q. Okay. Now Mr. Goode also received
- 20 Ativan; is that correct?
 - A. He did. Yes.
- 22 Q. And is it true that before chemical
- 23 restraints are applied that any underlying
- 4 disorder such as hypoxemia or hypoglycemia should

77

1 be treated?

- 2 A. I apologize, I lost you in the question.
- 3 Can you please repeat it?
 - Q. Yes, I will be glad to. Is it accurate
- 5 to say that before sedating a patient any
- 6 underlying problem, medical problem should be
- 7 treated first as a potential pitfall as
- 8 administering anti-psychotics to a patient who
- 9 really has an underlying disorder such as
- 10 hypoxemia or hypoglycemia?
- 11 A. Ideally that would be the case if there
- 12 is a suspicion for it, if it's a diabetic or they
- 13 have a low O2 sats, joint hypoxia, you would want
- 14 to consider addressing those first. But sometimes
- 15 you do the evaluation after you give the
- 16 medication because of the agitation behavior.
- 17 Q. Are you aware that Mr. Goode had
- 18 moderate hypoxia --
- 19 A. He had an O2 --
- 20 Q. -- before receiving chemical restraints?
- 21 A. He had a documented O2 sat of 90 percent
- 22 which wouldn't be considered hypoxia that would
- 23 induce this type of behavior. So that would
- 24 basically rule out the concern for hypoxia in this

- 1 patient.
 - Q. Doctor, is 90 percent low?
- 3 A. It is a low normal range. Yeah.
 - Q. Is it a condition which demands
- 5 supplemental oxygen administration?
- 6 A. It does not demand it. It can be 7 considered.
- 8 Q. It should be administered, correct,
- 9 supplemental oxygen?
- 10 A. Depending on the circumstances it should
 - 1 be considered. But you have to take a look at the
- .2 entire picture. We're talking about specifically
- 3 this case or talking about an O2 sat of 90 percent
- 14 in general as a number. It's case specific.
- 15 Q. Well, the Mississippi SOPs for EMS say a 16 90 percent reading should receive supplemental
- 17 oxygen, would you take issue with that?
- 18 A. I think it's case by case. If you have
- 19 somebody who has Eisenmenger's syndrome their 02
- 20 sat may never get above 85. So you wouldn't need
- 21 to give them supplemental oxygen if that's where
- 22 they live. That's what I'm saying you have to
- 23 look at case by case.
 - Q. Well, case by case if you get a 90

78 79 1 use of a O2 sat monitor to follow him. 1 percent reading, you just ignore that? That's what you've been told; correct? A. Q. What you do is you check it again; Α. That's what I read throughout the 4 right? record. Yes. Or you look at the clinical scenario and 5 A. 5 Q. You have written repeatedly that for 6 see if that's appropriate for that patient or if these types of patients 02 saturation monitoring 7 it's even a correct reading in that patient. is a requirement; correct? What was Mr. Goode's O2 saturation after Α. I don't believe I used the word he was admitted to the hospital? requirement. And I said when feasible. 10 The documented O2 sat was 90 percent. And are you saying -- have you ever had 11 And what was it 45 minutes later, 40 a patient that weighed 250 pounds or more who was 12 minutes later when he coded? in agitated delirium? You can't pick up an O2 sat during a 13 13 Α. Yes. 14 code basically. So you wouldn't be able to 14 Ο. Did you manage that patient? 15 A. 16 Q. Of course. What was it just before he 16 Actually in one of your testimonies or 17 coded? 17 one of your reports you say you and two untrained 18 I don't have a number to share with you. unarmed security guards subdued a patient who was Α. 19 You have no idea, do you? an agitated delirium just the three of you; right? 20 I don't recall that. But I'd be happy Α. I don't know what the number would be at 20 21 that point. No. 21 to review that testimony. 22 Because the hospital didn't monitor his 22 You have done that though, haven't you? 23 blood oxygen saturation; correct? 23 I've assisted with taking down patients 24 24 who are agitated. Because of his behavior precluded the 80 Yes. And the people that take them down The patient -- yeah. The patient should 2 typically are nurses; right? be monitored after a chemical restraint is 3 If the patient gets agitated in the utilized, sure. 4 emergency department they may be the ones. Q. Because -- and the monitoring needs to They're the first there to help out, sure. be done by a trained staff member --You think that this -- giving you the Α. A trained --6 benefit of the doubt this 170-pound bean pole was -- of the hospital? unmanageable? A trained staff member will be doing the 9 monitoring and reassessing of somebody, sure. Α. At what point are we talking about? 10 Q. At any point. Have you seen pictures of That's what you do after you give medications. 10 11 Mr. Goode? And what you want in a hospital $\operatorname{\mathsf{--}}$ not 11 12 A. I have seen some pictures of him. Yes. what you want, what you must have is appropriate 13 He was an absolute rail, wasn't he? staff for monitoring to have the education, 14 The BMI calculated about 24 which would training and demonstrated knowledge based on the 15 make him the normal range. specific needs of the patient population in at 16 He was a very skinny man, wasn't he? least the following areas, one of which is the 17 He was a normal man based on his body same application and use of all restraints or 17 18 mass index for his height and weight. seclusion used in the hospital including in how to Okay, fine. Giving you that, he recognize and respond to signs and physical and 19 certainly was not an NFL player, was he? psychological distress, for example, positional 21 Unless he was a puncher. 21 asphyxia; correct?

22

That's a very long statement with a lot

of parts to it. But basically if you have

24 secluded or restrained or excited delirium

22

24 correct?

Doctor, when you give a chemical

23 restraint that patient needs to be monitored;

1 patients, you should be monitoring and reassessing

- 2 them, paraphrasing the whole piece there. But,
- 3 yeah overall the concept seems reasonable. I'd
- 4 have to go through line by line to see if there
- 5 are things that would be case by case, but the
- 6 concept is reasonable.
- 7 Q. The concept of positional asphyxia is
- 8 something that a trained hospital staff member
- 9 should be looking for is unequivocal; correct?
- 10 A. Positional asphyxia, how are you
- 11 defining that?
- 12 Q. Doctor, come on, don't fence with me on
- 13 this. You know what positional asphyxia is, don't
- 14 you?
- 15 A. I know different types.
- 16 Q. You've written on it?
- 17 A. Sorry, I apologize for upsetting you.
- 18 I'm saying that there are a number of ways that
- 19 people define positional asphyxia, particularly
- 20 the hospital population, the elderly population
- 21 with restraints and poseys and getting into
- 22 positions within the gurney that can asphyxiate
- 23 them. If you're referring to the class of law
- 24 enforcement version where you put somebody on

23

- 1 in a CMS regulated hospital do not know what the
- 2 requirements are of CMS for chemically restrained
- 3 patient observation; is that correct?
- A. I know that we have certain requirements
- 5 to follow and we have protocols that are set up to
- 6 do that. But if you wanted me to go down a list
- 7 of all of them off the top of my head, the answer
- 8 would be no I couldn't give you that list off the
- 9 top of my head.
- 10 Q. You do know the monitoring the physical
- 11 and psychological well being of a patient who is
- 12 restrained, including, but not limited to
- 13 respiratory and circulatory status, skin
- 14 integrity, vital signs and any special
- 15 requirements specified by hospital policy
- 16 associated with the one hour face-to-face
- 17 evaluation is required by CMS, you do know that,
- 18 don't you?
- 19 A. That's the practice that we tend to do
- 20 in our hospital. So if it meets the requirements
- 21 it would make sense. Right.
- 22 Q. Baptist Memorial Hospital did not do
- 23 that with Troy Goode; correct?
- 24 A. They were monitoring him. They were --

- 1 their stomach and hobble them and hogtie them in a
- 2 prone maximal restrain position, that really is
- 3 not a theory that's out there for hospitals to be
- 4 overly concerned with.
- Q. Well, I'm using the definition that's
- 6 used by the Center for Medicare and Medicaid
- 7 Services, CMS.
 - A. Okay.
 - Q. Are you familiar with that?
 - A. With their definition I'm not. No.
- 11 Q. You work in an emergency department.
- 12 Does your emergency department accept federal
- 13 funds?

8

10

- 14 A. We do. Yes.
- 15 Q. And you don't know what is required of
- 16 you in working in a hospital by the CMS that
- 17 governs hospitals receiving federal funds; is that
- 18 correct?
- 19 A. Your question was do I know the
- 20 definition of positional restraint I think by CMS
- 21 and the answer --
- 22 Q. That's not what I asked.
 - A. Okay. Please ask your question again.
- Q. I asked you, you as a physician working
- 1 they did a set of vital signs. They were
 - 2 reevaluating him. And there's an hour-to-hour
 - 3 reassessment. So he was assessed at that time.
 - Q. How did they monitor him?
 - 5 A. They could listen to him. They would
 - 6 come back and they had somebody else also just
 - 7 watching his physical well being. There is no
 - 8 requirement --
 - Q. Who was watching his physical well
 - 10 being?

15

17

- 11 A. At one point there was a police officer
- 12 -- well, the whole time there's a police officer
- 13 in the room.
- 14 Q. What was his medical training?
 - A. I don't know specifically what his
- 16 medical training was.
 - Q. What was his ability to detect
- 18 respiratory distress?
- 19 A. His ability to detect respiratory
- 20 distress would be a change in status. And he
- 21 actually did that.
- 22 Q. Yes, when he stopped breathing. What
- 23 was his ability to recognize agonal breathing?
 - A. He reported that basically that the

85

83

1 change in breathing status was very irregular. 2 reported that out to nursing. That would be 3 agonal breathing. What medical training does that police 5 officer have? Again, I earlier said I believe most of 7 them have a basic medical or basic life support training as part of --8 What medical training did Baggett have 10 so that he was a trained qualified person to 11 observe Troy Goode, Baggett? I said earlier most police officers have 12 A. 13 a basic --14 I'm not asking you, Doctor. You're not 15 answering the question. I'm asking you about

18 A. Okay.

17 Diego.

- 19 Ο. What training did Baggett have?
- 20 Α. I don't know.
- See that wasn't hard, was it? Is there

16 Officer Baggett, not some police officer in San

- 22 a standardized definition of excited delirium that
- 23 you can direct me to?
- 24 Not a standardized definition that

- 1 everybody has exact same language on, no.
- All right. Are there clear reasons why

87

- 3 patients that you deem to be an excited delirium
- 4 die?
 - A. Are there reasons why?
- Q. Are there clear reasons why some
- patients that you deem to be in excited delirium
- die?
- There really is no specific
- predictability of who -- if you have 10 in a room
- who might or might not die. There are certainly
- indicators postmortem and some premortem type
- things. But in general they're very difficult to
- tell who is going to go into cardiac arrest.
- Did you produce a work entitled Excited
- Delirium Redefining an Old Diagnosis?
- I did write a paper I believe with that 17 18 title. Yes.
- 19 MR. EDWARDS: Give us just one second,
- 20 we'll locate that and we'll mark that.
- 21 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- WAS MARKED AS EXHIBIT NO. 5 TO THE TESTIMONY OF
- THE WITNESS AND IS ATTACHED HERETO.)
- 24 BY MR. EDWARDS:
- Doctor, you authored this paper or this Q.
- 2 report?
- 3 A. It looks like it. Yes.
- 4 And sent it to an attorney in Rhode 0.
- 5 Island?
- Or Connecticut maybe -- or is it Rhode Α.
- 7 Island? Yeah, I guess it was Rhode Island based
- 8 on this. Sure.
- Okay. Now in this whatever this report,
- 10 if you will, you noted that early recognition of
- 11 cardiac arrest and prompt treatment will increase
- survivability immensely; is that correct?
- 13 Α. What page are you on there, I'm sorry?
- 14
- 15 I did write that yeah, for V-fib arrest. Α.
- 16 Correct.
- 17 Ο. Okay. So that being the case, doesn't
- 18 it follows, does it not, that you need a medically
- 19 trained person who is competent to detect a
- 20 cardiac arrest and observe?
- Well, to determine a cardiac arrest does 21
- 22 not obtain a medical degree of training. It's
- 23 basically change in status.
 - Q. And a change in status might be

- 1 observed; correct?
 - A change in status is basically going
 - 3 from responsive to unresponsive or to stop
 - 4 breathing, that would be the change in status
 - 5 you're looking for and that doesn't require
 - specific medical training to observe that.
 - How do you know that Officer Baggett was
 - even looking at Mr. Goode immediately prior to the
 - change in status, how do you know that?
 - 10 His testimony was talking about the fact
 - that he was making noises, yelling, talking,
 - whatever it was, and then there was a change in
 - status, and so he went over to look at him. So he
 - was hearing which is a part of the assessment. If
 - he's yelling and talking and making noises, he is 15
 - basically breathing and moving air in. When there

 - was a change the officer reported that he went to assess him or take a look at him.
 - Do you know that Officer Baggett was not on his cell phone with his girlfriend?
 - 21 That was not reported. But I can't say 22 because, I was not in the room.
 - 23 The best way to detect a change in 0.
 - 24 cardiac status is by looking at rhythm strips;

Alpha Reporting Corporation

90 91 1 as many as 1.7 million episodes of agitation 1 correct? A. A rhythm strip would if it was reading annually in excited delirium in the United States? 3 would show a change in status, that would be That didn't make sense, I apologize. 4 correct. Okay. Let me reask it because I'm And that would take a medically trained advised that I left out in emergency departments 5 Q. 6 person to notice it on a rhythm strip? is the frequency of excited delirium surprisingly 7 To some degree depending on what the common? 8 rhythm change was. If it went from the blipping It does happen in emergency departments. A. QRS complex that we see it's a flat line, you Surprisingly common is a -- I guess a relative 10 know, that's common that people could recognize 10 11 that without having to be medically trained when 11 Well, yeah, but those are your words in 12 the alarms go off. 12 the publication of psychiatric emergencies in pregnant women; correct? 13 In your hospital do you have any 13 14 non-medically trained people monitoring rhythm 14 Excited delirium in pregnant women, that I'm not sure is -- I'd like to see that 16 A. Rhythm strips, no. publication before I comment on that part. 17 MR. EDWARDS: Did you mark that, Bobbie? 17 Okay. Are there a number of things 18 THE REPORTER: Yes, I did. It's No. 5. which can cause excited delirium? 18 MR. EDWARDS: Okay. For number six we 19 19 Α. That cause excited delirium, was that 20 are missing that. Will you hold that? your question? 20 21 THE REPORTER: Yes, I will. 21 Ο. Yes. 22 BY MR. EDWARDS: 22 There are a number of things depending Doctor, is it also true that agitation 23 on how much you want to break them down. 24 and excited delirium is surprisingly common with 24 major categories are untreated psychiatric 93 1 disorders and typically stimulant drugs are the 1 situations can cause agitate -- agitation 2 two big categories. 2 appearing to be excited delirium? 3 It can have agitation with some Q. Can hypoglycemia cause agitation? 4 Α. It can cause agitation. Yes. 4 characteristics that could be similar to agitated Q. Can heat stroke? 5 delirium. 6 A. Cause agitation, yes. So it's fair to say there are a number 7 Can thyroid disorders? of things which can reproduce a state of agitation 8 Cause agitation, yes. which have characteristics to use your word of 9 Psychiatric issues you already agitated delirium; correct? 10 mentioned; right? 10 Α. Some characteristics. Yes. 11 Correct. In the -- did you author a treatise Α. 11 And psychotropic drugs used to treat entitled Guidelines For Investigating Officer 13 psychiatric issues in and of themselves can cause Involved Shootings? 14 a condition which appears to be excited delirium; 14 A book you mean or --15 right? 15 Q. Whatever. Is it a paper or a book, what 16 It can cause agitation and symptoms that 16 is it? 17 would be similar to some of the symptoms or 17 The title is familiar. I need to look Α. 18 characteristics of excited delirium. 18 at -- I've authored many things. It sounds 19 Right. And withdrawal from those drugs familiar though. 19 can also cause symptoms which appear to be 20 Well, what's interesting -- here I'll 21 attendant to excited delirium; right? 21 show it to you. Can you see this? 22 A. Again, similar characteristics can come 22 Α. Yes. 23 from drug withdrawal. Yes. It says Guidelines for Investigating 23 Q. Emotional reactions from stressful 24 Officer Involved Shootings, Arrest Related Deaths

Gary Vilke - December 08, 2017

6

1 and Deaths in Custody.

Yes. A.

Darrell L. Ross, Gary M. Vilke. That's

4 you, isn't it?

A. That is correct.

And this strangely has a publication

7 date of 2018. Can you explain that?

I do not know how publishers work. No,

9 I do not. It just came out this past year.

Okay. But this is a recent publication

11 by you; right?

A. 12 I'm one of the editors. Yes.

13 One of the editors. Are the contents of

14 it reliable?

As reliable as the authors and the 15 A.

16 editors, sure.

Well, would you have included anything 17 0.

18 in your compilation which you deem to be

19 unreliable?

20 A. That would not be the intent. No.

You have testified in a number of cases

22 that there are predisposing physical conditions to

23 death in a person exhibiting characteristics of

24 excited delirium; is that correct?

2 predisposing conditions that would predispose them

There are -- yes. There are certain

95

for having a cardiac arrest. Yes.

And some of those predisposing

conditions are what?

Cardiac enlargement, you know,

ventricular hypertrophy, coronary artery blockages

or bridging veins, bridging arteries, kidney

failure, elevated potassium, things like that.

Okay. Mr. Goode had which one of those?

I didn't see those -- any of those in 11 Α.

12 Mr. Goode.

13 Q. Another thing that you wrote might be a

14 predisposing condition to death in excited

delirium was sickle cell syndrome; is that

16 correct?

18

17 A. That can be a predisposing factor. Yes.

And why is that? Ο.

19 Because it's -- under physiologic stress

20 can cause the red cells to sickle and decrease

21 blood flow to various organs.

Did Mr. Goode have any pre-existing

conditions which you would deem would have put him

24 at risk for excited delirium death?

I think usually I refer to as increased

2 risk for cardiac arrest that can be exacerbated by

3 the excited delirium. But in his case I didn't

see any other predisposing factors.

Q. Can respiratory diseases increase risk

6 for death in excited delirium?

Respiratory diseases have not been shown

8 to cause or contribute to cardiac arrest unless

9 there is an acute event going on with it, meaning

10 if he was having an acute asthma attack that would

11 be a different potential issue complicating

12 feature, but no. Other than that, the history of

13 asthma in and of itself would not be considered a

14 complicating predisposing factor.

15 In the studies that you've done with

16 Chan and Neuman on this subject you excluded

17 participants that had a history of asthma;

18 correct?

19 In some of the studies, yes. In others, Α.

20 no.

21 In any of the studies that you knowingly

22 include somebody with a history of asthma?

23 A. Yes.

24 Which study was that? Ο.

I'd have to look specifically. It was

either the pepper spray restraint study or the

study with 25 and 50 pounds of weight on the back.

Well, we don't have any involvement with

pepper stray here, would you agree?

Α. I agree.

In this text this guidelines for

investigating officer involved shootings, et

cetera, you state "Whether this behavior and

clinical presentation represents a true diagnosis

or syndrome remains controversial in medical

literature." Is that accurate?

13 There are people who argue different

14 directions, so that would make it controversial.

15 So that would be make it accurate, sure.

16 All right. There is a lack of consensus

in the medical community whether excited delirium 17

even exist. You wrote that?

19 Again, if there are dissenting people 20 who don't agree you don't have consensus. So that

would be accurate. 21

22 And you know that some medical examiners

23 have asked why is it that the police are always

24 present when somebody dies of excited delirium;

99 1 right? 1 in there. Yes. A. I have heard that asked by at least one You also note that many of the people 3 medical examiner. who die from excited delirium or allegedly were Well, the 2015 AAFS seminar brochure restrained prior to being arrested and 5 contains that statement in it. Are you aware of transported. Is that correct? 6 that? Α. They're restrained I guess after being 7 Not particularly. arrested and transported. Yes. Α. 8 What -- you note in your book which --And you also note -- you address the THE WITNESS: Bobbie, let's reserve a prone maximal restraint position which is the 10 number for the doctor's book which we will hogtie in your book; right? 11 maintain at our presence. It can be obtained --A. 11 There is writings on that. Yes. 12 it is available on Amazon as is everything else in What physical evidence in this case is 12 13 the world for anybody who wants to get it. there that would in your mind allow you to rule (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 14 out the cause of death as being excited delirium? 15 WAS MARKED AS EXHIBIT NO. 7 TO THE TESTIMONY OF To rule out the cause of death? 16 THE WITNESS AND IS NOT ATTACHED HERETO.) 16 Yes, sir. What evidence, what 17 BY MR. EDWARDS: 17 exclusionary evidence is there that would allow 18 Q. 18 you to rule out the cause of death as excited You wrote in your book, Doctor, or you 19 included in your book medical literature includes delirium? 20 suggestions that excited delirium "is a fabricated There wasn't any that I could find. So A. 20 21 diagnosis that was created to cover up police 21 he didn't have anything on autopsy that was an 22 brutality." Did you include that in your book? obvious other cause of death. The history That is the opinions of some authors. 23 mechanism were consistent with it. So I couldn't 24 And so for completeness I believe it was included 24 rule out excited delirium because I think it is 101 100 1 the cause of death. 1 invariably associated with excited delirium 2 deaths; correct? Low oxygen saturation is not consistent 3 with a prone restraint in hogtie, is it? I don't recall that specific line. So 4 I'd have to review the paper. But like I said, I 4 Α. A low oxygen saturation? Yes, sir. From your studies? 5 know that hyperthermia is common in patients who In the studies the position did not have death from excited delirium. 7 lower one's O2 saturation, that's correct. Mr. Goode was not hyperthermic? I just asked you about ruling out. There was no --9 Hyperthermia -- hyper. 0. Correct? 10 MR. EDWARDS: It's hyper, Bobbie, not 10 There was no documentation for core body 11 temperature. But the attempted oral temperature 11 hypo. 12 BY MR. EDWARDS: 12 was not elevated. Hyperthermia is invariably associated 13 Well, you know that Dr. Barnhart the 14 with excited delirium deaths; correct? forensic pathologist that did the autopsy 15 It is common in excited delirium deaths. specifically looked for hyperthermia; right? 16 It's not universal. 16 In the medical records so did I. Yes. 17 Well, that's not what Dr. Stratton said 17 Well, she wrote in her report that he Ο. 18 from the LA studies, is it? 18 was not hyperthermic; right? 19 From his pre-hospital studies or his 19 There was no evidence of hyperthermia Α. 20 case series? because there's no other documented core body 21 The paper upon which you relied, the LA temperature. But I don't remember exactly how she 21 22 Studies where they had the study a group of 221 22 worded it. 23 people with the characteristics of excited 23 And for that reason she did not put 24 delirium. Dr. Stratton wrote hyperthermia is 24 cause of death as excited delirium; correct?

102
1 A. She did not write it in her report. But
2 she reported it in her deposition.

3 Q. Right. When prompted by Mr. Phillips

- 4 she said oh, yeah that's what I mean by
- 5 complications of LSD is excited delirium, that's
- 6 what we're talking about?
- 7 MR. PHILLIPS: Object to the statements
- 8 of counsel and the characterization of the
- 9 testimony.
- 10 BY MR. EDWARDS:
- 11 Q. Is that what she wrote, Doctor?
- 12 A. Sorry. She said that it was excited
- 13 delirium that she felt was the cause of death that
- 14 was the complicating factor of the LSD.
- 15 Q. Then why didn't she just put excited
- 16 delirium, that's what Dr. DiMaio said to do?
- 17 A. Based on her deposition she would have
- 18 preferred to see a core body temperature had been
- 19 documented and it wasn't. So she chose to
- 20 document the way she did, but describe it the way
- 21 she did in deposition.
- 22 Q. If a death in custody -- a death in
- 23 restraint in custody occurs, should that be
- 24 classified as homicide?

- 1 A. Yes. Somebody with elevated body 2 temperature is at increased risk to going into
- 3 cardiac arrest if in a state of excited delirium.
- 4 Q. Therefore, it would be standard of care
- 5 for a hospital with a patient in perceived excited
- 6 delirium to have their temperature monitored;
- 7 right?
- 8 A. Ideally at some point during the
- 9 evaluation a core body temperature would be
- 10 obtained when feasible. Yes.
- 11 Q. Well, if hyperthermia is a harbinger of
- 12 bad outcome in persons with excited delirium, you
- 13 got to know what the temperature level is to know
- 14 if they're in hyperthermia; correct?
- 15 A. When you can obtain a core body
- 16 temperature that would be optimal. But like many
- 17 other things in the excited state it's very
- 18 difficult to obtain safely in acute agitated
- 19 phase.
- 20 Q. Where in your book do you put all of
- 21 these qualifications that you're throwing out now?
- 22 If you can obtain them, you don't say that in
- 23 here, do you?
- 24 A. That's --

- A. That is an area that I don't opine in.
- 2 That's more of a medical examiner pathology area.

103

105

- 3 So I don't give opinions on that topic of manner
- 4 of death.
- Q. You're opining on cause of death which
- 6 is not your field of expertise; right?
- A. I work with cause of death on a regular
- 8 basis in the emergency department. I don't
- 9 determine manner of death which is what you're
- 0 asking me.

13

- 11 Q. You don't do autopsies; right?
- 12 A. That is correct.
 - Q. You've never had any training in
- 14 forensic pathology?
- 15 A. Emergency medicine is one giant forensic
- 16 evaluation of patients who come in altered. So
- 17 we're seeing patients in the process of dying,
- 18 immediately after dying, and resuscitated from
- 19 dying. So we have a lot of evaluation skills with
- 20 regards to causes of death. I just don't do
- 21 manner of death.
- 22 Q. Do you agree that hyperthermia is a
- 23 harbinger of a bad outcome in persons with excited
- 24 delirium?

104

- 1 Q. You say yes -- you say do this for a
- 2 person in excited delirium. You list A, B, C and
- 3 D. You don't say do this if you can A, B, C and
- 4 D; correct?
- 5 MR. PHILLIPS: I object to your being
- 6 argumentative with the witness and being abusive
- 7 to the witness and you're not even giving him a
- 8 chance to answer the questions you're posing.
- 9 MR. EDWARDS: Well, that's noted.
- 10 Overruled.

- 11 BY MR. EDWARDS:
 - Q. Go ahead, Doctor.
- 13 A. The textbook there is for the evaluation
- 14 afterwards. It's more based on the postmortem
- 15 evaluation, but there is some treatment categories
- 16 in there. But almost every paper that I can think
- 17 of is qualified by when feasible or when possible
- ./ Of is qualified by when leasible of when possible
- 18 or when safe, not just to stick a rectal probe in
- 9 a jumping, bouncing, moving around guy and create 0 the risk for more injury. You wait until they're
- 21 sedated then you get a better evaluation.
- 22 Q. That's all that would have been required
- 23 was a thermometer in the rectum?
- A. You make it sound very easy to do in a

1 agitated patient. But that is how you would get a

2 core body temperature ultimately.

- Q. Doctor, one of the studies that you
- 4 quoted in this book Guidelines for Investigating
- ${\tt 5}$ Officer Involved Shootings, et cetera, was one by
- 6 Dr. Mash, M-A-S-H?
- 7 A. Okay.
- 8 Q. Right?
- 9 A. She is probably one of the references in 10 that book, sure.
- 11 Q. And you quoted a two protein biomarker
- 12 signature can serve as a reliable forensic tool
- 13 for identifying the excited delirium syndrome at
- 14 autopsy. Do you agree?
- 15 A. That is a paraphrasing of her research,
- 16 but basically there are markers that she has
- 17 identified in certain portions of the brain that
- 18 are consistently different in patients who have
- to are consistently different in patients who have
- 19 signs and symptoms consistent with excited
- 20 delirium versus other causes of death.
 21 0. And you believe based on those studies
- 22 that you can rely -- determine whether a person
- 23 has excited delirium on autopsy?
- 24 A. Based on her reports and publications if

1 the brain meets the certain criteria that she has

107

109

- 2 studied over the years, it would be consistent
- 3 with a diagnosis of excited delirium. And she's
- 4 comfortable saying that that's what that is if all
- 5 the clinical features match up.
- 6 Q. Was there any such finding in Troy
- 7 Goode?
- 8 A. I am not aware that his brain was sent
- to a Deb Mash's lab in Miami.
- 10 Q. Are you saying that Dr. Barnhart was not
- 11 competent to make that determination?
- 12 A. I didn't say that. I'm saying that this
- 13 is a specialized test that as far as I know is
- 14 only done at the brain center down in the
- 15 university of Miami. So that every pathologist
- 16 across the country doesn't do this study. And I'm
- 17 not aware of any others that actually do. So
- 18 Dr. Barnhart would fall in that category rather
- 19 than what you described incompetence.
- 20 Q. Well, okay. So you don't have any
- 21 evidence of the two protein biomarker signature;
- 22 right?
- 23 A. Again, I wasn't aware that the brain was
- 24 sent for that specific study to Deb Mash, so no.

108

- Q. Now well you understand about prophamine
- transporter of proteins and heat shock protein 70in the brain with person with excited delirium,
- de la company de
- 4 you have any appreciation of that?
- 6 transported are down regulated and increases
- 7 amounts of dopamine in the system which sort of
- 8 revs up the system and that is thought one of the

Just the concepts that the dopamine

- 9 potential mechanisms of why the excited delirium
- 10 physiologic characteristics develop.
- 11 Q. Okay. On autopsy in Mr. Goode there was
- 12 no protein biomarker signature indicative of
- 13 excited delirium found; correct?
- 14 A. Again, these are things that tend to be
- 15 done at the specialized lab in Miami. So not that
- 16 I'm aware of, no.
- 17 Q. Okay. Is the heat shock protein 70 a
- 18 protein in the brain that accumulates in response
- 19 to hyperthermia?
- 20 A. I'm not sure if it's in response to or
- 21 introduces hyperthermia. It seems to be
- 22 associated with hyperthermia.
- 23 Q. Okay. You agree that Troy -- there's no
- 24 evidence that Troy was ever hyperthermic; correct?

- A. There was no documented elevated
- temperature in Troy Goode.
- 3 Q. Do you have any undocumented evidence in
- 4 your opinion that would indicate that he was
- 5 hyperthermic?
- A. The only documentation of physiology
- 7 that could be consistent with it was some
- 8 diaphoresis noted by the paramedics. But that was
- 9 really the only temperature that was taken was an
- 10 oral temperature that was reported to be tucked
- 11 into a cheek which is obviously not a reliable
- 2 core body temperature. So I didn't see anything
- 13 that showed hyperthermia.
- 14 Q. Did you give an expert report in the
- 15 case of Stetter, S-T-E-T-T-E-R versus Hanover
- 16 Park?

- A. I was involved in that case. Yes.
- 18 Q. Is that a case where you retracted your
- 19 opinion that excited delirium was the cause of
- 20 death?
- 21 A. I don't recall that.
- 22 Q. You were hired by the police in that
- 23 case also; right?
 - A. I would have to review that. I don't

remember specifically who hired me, whether it was the city, the police. I don't remember who hired me in that case.

- 4 Q. Well, we're not talking about the police 5 I'm talking about a governmental entity. Those
- 6 are the only entities that you work for, right,
- 7 for the police and the government?
- 8 A. Sometimes hospitals and individuals
- 9 depending on what the lawsuits are. But in
- 0 general it's the municipalities.
- 11 Q. Yeah, you're right. I should qualify my 12 question. Civil rights cases you only testify for
- 13 the police departments; correct?
- 14 A. I testify -- I think in the past number 15 of years they're the ones who approach me for my
- 16 opinions. And if needed I testify for them, yes.
- 17 Q. Let's see if we agree on this. Once an 18 excited delirium patient is delivered to a
- 19 hospital by the EMS, that patient becomes the
- 20 responsibility of the emergency room physician and
- 21 the hospital personnel; correct?
- 22 A. I mean, they certainly have a level of 23 responsibility, sure. There's a hand off at some
- 24 point.
- 1 just means that they could go from elevated
- 2 respiration to normal respiration; is that
- 3 correct?
- 4 A. I said if you're defining that as
- 5 respiratory depression, then that would be a form
- 6 of depression. Yes.
- 7 Q. Except Dr. Deitch found that nearly half
- 8 of the people after chemical restraint developed
- 9 hypoxia, low blood oxygen; correct?
- 10 A. I haven't read this paper in detail to 11 give you that answer, but I can check for sure.
- 12 Q. Nearly half. So assuming that that's
- 13 correct nearly half of the people receiving
- is correct hearty harr or the people receiving
- 14 chemical restraint go into hypoxia, that requires 15 close monitoring after chemical restraint, does it
- 15 close monitoring after chemical restraint, does i
- 16 not?
- 17 A. If there was hypoxia involved,
- 18 monitoring would be part of the evaluation of that
- 19 hypoxia, sure.
- 20 Q. Well, no, if chemical restraints result
- 21 in nearly half of the people receiving the
- 22 restraints developing hypoxia, just makes common
- 23 sense that somebody trained medically needs to
- 24 observe those people; correct?

111
THE WITNESS: And whenever you have a

- 2 time for another five-minute break, I would
- 3 appreciate it whenever is a good time for you.
- 4 MR. EDWARDS: Go right ahead. Let's
- 5 take it.
- 6 THE VIDEOGRAPHER: Time off the record
- 7 is 10:25 a.m.
- 8 (WHEREUPON, A BREAK WAS TAKEN AND THE
- 9 PROCEEDINGS CONTINUED AS FOLLOWS:)
- 10 THE VIDEOGRAPHER: Time back on the
- 11 record is 10:33 a.m. Counsel, you may proceed.
- 12 MR. EDWARDS: Thank you. Bobbie, would
- 13 you hand the doctor Exhibit 4.
- 14 BY MR. EDWARDS:
 - 5 Q. Doctor, I'm sorry, did you say that you
- 16 were not familiar with this?
- 17 A. I may have looked at it at some point,
- 18 but I don't recall the specifics of it.
- 19 Q. Okay. This is dealing with the study by
- 20 Dr. Deitch about respiratory depression at
- 21 chemical restraint; is that correct sir?
- 22 A. That is what they're looking for in the
- 23 study looks like. Yes.
- Q. And you said well respiratory depression

113

112

- 1 A. Again, it depends on the case, the type
 - 2 of patient, the evaluation. But based on the
 - 3 study, they define looks like hypoxia is O2 sat of
 - 4 93 percent or less for greater than 15 seconds.
 - 5 But as far as the patient population, the
 - 6 medications, and what was being used, and what was
 - 7 the indications for it, I haven't had a chance to
 - 8 better evaluate this paper to see applicability in
 - 9 this case.
 - 10 Q. Would you agree -- well, Dr. Deitch
 - 11 defines hypoxia below 93 percent?
 - 12 A. Ninety-three percent or less. Yes.
 - 13 Q. And Mr. Goode the only reading we have
 - 14 on him was 90 percent; correct?
 - A. That's the only documented reading.
 - 16 Yes.

- 17 Q. And would you agree that hypoxia is
- 18 rarely recognized by doctors unless the patient is
- 19 being monitored by pulse oximetry?
- 20 A. Hypoxia is typically defined by pulse
- 21 oximetry. So as far as if you're looking --
- 22 doctors don't recognize hypoxia. They tend to
- 23 recognize signs or symptoms of ventilatory
- 24 impairment or respiratory problems, but not

115 1 defining hypoxia. 1 watch for the ventilatory effects of Q. Well, the purpose of pulse oximetry is 2 benzodiazepines. 3 to see how much oxygen a patient is getting into Right. It says, and I'm referring to 4 the bloodstream; right? 4 the -- I'm referring to the package insert. And it says accordingly, airway patency must be A. How much of their red cells are assured and respiration monitored closely; right? oxygenated by oxygen. Yes. 7 You can't tell that by looking at a That's appropriate? Ο. You want to make sure they have an open 8 person, can you? Α. You can't give a -- create a number that airway and that they're breathing. That's 10 way, no. You can't look and say that's a 96 or a reasonable, sure. 11 92, no. And that's done again by pulse oximetry 11 12 Q. I want to go back to the chemical 12 among other things? 13 restraints administered to Mr. Goode. We said one That is one way of doing it. 13 Α. 14 of them was the Haldol and the other was Ativan; And Mr. Goode was not monitored for his 15 is that correct? respiration; correct? 16 A. Yes. 16 A. He was not on a continuous pulse 17 Q. And Ativan is used for what purpose? 17 oximetry. 18 It's a benzodiazepine anxiolytic and has Q. He was not monitored except during --18 19 sedation properties to help calm and relax people. 19 the only reading that they got on his pulse 20 oximetry or by pulse oximetry was in triage at the Q. Do you agree that the most important 21 risk associated with use of Ativan injection is hospital; correct? 22 respiratory depression? That was the only pulse oximetry reading It's certainly one of the areas that we 23 that I saw. 24 want to look into watch. It's very important to 24 MR. EDWARDS: Bobbie, this is on the 116 117 1 exhibit list number 23 and if you would mark Restraint can cause a flight or fight 2 that -- on our exhibit list, if you would mark 2 syndrome. It doesn't always doesn't have to. 3 that as the next exhibit please. Are you familiar with a study done by 4 Dr. Barnett entitled Perceptions of supported and 4 MR. GASS: Is this Exhibit 8? THE REPORTER: Yes. It is Exhibit 8. unsupported prone-restraint positions? 6 MR. GASS: Can we have the title of it, Sounds familiar but I couldn't go through the details of the study for you. 7 please. MR. EDWARDS: It's the package insert 8 Well, I'll get you a copy. MR. EDWARDS: Bobbie, it's No. 11 on our 9 for Ativan. 9 10 MR. GASS: Tim, I'll tell you with the 10 list. 11 echo that's created with you being on a different 11 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 12 audio, it's almost impossible to understand what 12 WAS MARKED AS EXHIBIT NO. 9 TO THE TESTIMONY OF 13 you just said. THE WITNESS AND IS ATTACHED HERETO.) 14 THE WITNESS: I'll say it. It says that 14 BY MR. EDWARDS: 15 Ativan (lorazepam) injection IV. It's reportedly 15 Doctor, looking at this, does this 16 refresh your memory that you've seen this paper 16 the package inserts. Looks like it's typed out 17 and it's approximately 20 pages. 17 before? 18 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 18 It vaguely familiar. But I don't 19 WAS MARKED AS EXHIBIT NO. 8 TO THE TESTIMONY OF 19 remember the details of how they did the study. 20 THE WITNESS AND ATTACHED HERETO.) 20 Okay. It was published in the Journal

Alpha Reporting Corporation

22 that?

Α.

0.

Yes.

23

21 of Psychiatric and Mental Health Nursing. You see

Okay. Do you know anything about the

21 BY MR. EDWARDS:

Q. Doctor, do you agree that when a person

23 is restrained in a hogtie that that triggers what

24 laypeople call the flight or fight syndrome?

Gary Vilke - December 08, 2017

1 study or the results that were reached?

A. I would probably have to answer that no 3 at this point.

- Okay. If you assume that two positions
- 5 were studied. One involved prone position with
- 6 arms straight out at the sides. The other
- 7 involving a prone position with arms supporting
- 8 the chest to avoid pressure on the chest wall
- okay. Are you with me?
- 10 Yes. A.
- 11 Would you agree that both of those
- 12 positions that I just described are less confining
- 13 than being hogtied?
- 14 I mean, it's a different type of
- 15 confinement for the supported prone position. But
- 16 they are -- certainly have more movement
- 17 availability in parts view one and two.
- 18 Are you surprised that the results of
- 19 testing those two positions showed that a
- 20 supported position allowed for greater oxygenation
- 21 where the chest was not pressed down upon the
- surface?
- 23 A. I would be surprised that the
- 24 unsupported prone position had any changes in

- 1 oxygenation. So that's -- I would be surprised if
 - there was a difference between the two to be
 - 3 honest.
 - Okay. Have you seen the Baptist -- have

119

121

- you seen any of the Baptist protocols?
- A. I have not. No.
- Ο. Would you -- assume that there is a
- Baptist protocol that warrants against putting any
- pressure on a patient's back who is in the prone
- position because of dangers to the patient. Would
- you agree or disagree with that protocol or with
- that policy?

13

- A. Well, that seems very vague and
- generalized. I mean, if you're doing back surgery
- on somebody they're going to be prone and you're 15
- going to be putting pressure on them, so it seems
- like a odd specific language in a protocol. 17
- Well, if Baptist has that protocol, 18
- would you take issue with the assumption that by
- placing any pressure on the patient's back
- endangered the patient?
- 22 I would.
- 23 MR. UPCHURCH: Object to the form. This
- 24 is David Upchurch.

- that says that LSD is a stimulant?
 - I think it's sort of generalized known.
 - 3 I'd have to actually look to see where it's
 - 4 written down. I know it's there. I just -- it's
 - 5 sort of a more of a common knowledge than a
 - area -- but I can certainly look for a reference
 - if you'd like. But I don't have them off the top
 - of my head.
 - 0. Well, actually, I researched it the most
 - is a Dr. Nichols at UNC and he says it's not. Do
 - you have any basis to disagree with Dr. Nichols? 11
 - 12 That it doesn't have stimulants
 - properties, I would definitely disagree with that.
 - It does raise heart rate. It does increase
 - 15 breathing rate. Those are stimulant properties.

 - 16 I asked you if LSD is a sympathomimetic, that's S-Y-M-P-A-T-H-O-M-I-M-E-T-C, agent? 17
 - 18 Sympathomimetic. It certainly has
 - stimulant properties. That's what I'm sort of
 - saying. Those are actually -- it's classified as
 - 20
 - a stimulant or a hallucinogenic with stimulant properties which would define it that is has
 - 23 having sympathomimetic components to it.
 - Like to the extent of cocaine?

120

I would have to look at the whole

- 2 content. But I think patients are in the prone
- 3 positions on a regular basis for various reasons,
- 4 wound care, dressing changes, things like that.
- 5 So there's going to be pressure. So I would be
- 6 surprised if this protocol specifically said no 7 pressure should be applied. That's really the
- 8 extent I probably would comment on it right now.
- 9 BY MR. EDWARDS:
- 10 Q. Well, if it does you disagree with it;
- 11 is that fair?
- 12 I would not agree or disagree. I would
- 13 just say it seems to be a little bit broader than
- 14 what need to be in a typical policy.
- 15 Is LSD -- help me with this 16 pronunciation, a sympathomimetic agent?
- 17 It is a stimulant more in the

23 literature, in toxicologic literature.

- 18 hallucinogenic family. But it also has stimulant properties.
- 20 What's the basis for your statement that 21 it has stimulant properties?
- 22 That's just what's known in the medical
- 24 Q. I want you to point me to the literature

Gary Vilke - December 08, 2017

1

1 A. Not to that extreme. No.

- Q. To the extent of methamphetamine?
- A. Not typically, no.
- 4 Q. Those drugs are the ones most commonly
- 5 associated with the syndrome you term excited
- 6 delirium; right?
- 7 A. That would be correct.
- 8 Q. And as we said here today you can't
- 9 point me to any authority that says LSD is a
- 10 sympathomimetic agent; correct?
- 11 A. Or have stimulant properties, again,
- 12 it's sort of common knowledge in the emergency
- 13 department that we see patients with the stimulant
- 14 changes associated with LSD. But, again, having
- 15 to refer to a direct quote, no I'd have to look
- 16 that up for you.
- 17 Q. Okay. That's all I ask. So your answer
- 18 is no you can't tell me as we sit here today an
- 19 authority that would support the proposition
- 20 you're asserting that is that LSD is a stimulant?
- 21 A. That has stimulant like qualities, yes.
- 22 Q. Okay. Are you familiar with the work by
- 23 Dr. Hick, Metabolic Acidosis in Restraint-
- 24 associated Cardiac Arrest?

A. I have reviewed that in the past, yes.

123

- Q. Do you disagree with Dr. Hick's
- 3 conclusion -- well, what was his conclusion in
- 4 that study?
- A. I've read hundreds if not thousands of
- 6 studies over the last 15 years. I don't remember
- 7 his exact conclusion, I apologize.
- 8 Q. Do you agree with the statement in that
- 9 study "continued combativeness despite restraints
- O especially in the setting of sympathomimetic
- 11 agents such as cocaine seems to be a marker for
- 12 patients at higher risk for death regardless of
 - 3 pathophysiology." Do you agree with that?
- 14 A. I mean, patients who continue to
- 15 struggle and struggle, I think you said despite 16 restraints, certainly will continue to create
- 17 acidosis and would be considered to be a higher
- 18 risk than somebody who didn't, yeah.
- 19 Q. So then it follows that the appropriate
- 20 medical response as you have said is to get the
- 21 patient out of the flight or fight syndrome as
- 22 soon as possible; correct?
- 23 A. I don't think I ever said that. I think
- 24 I said to start the sedation process to try to

124

- 1 calm them.
- Q. As soon as possible?
- 3 A. As soon as possible and safe. Yes.
- 4 Q. In this case you are aware that there
- 5 was no effort to sedate Mr. Goode until well after
- 6 he had arrived at the hospital, are you?
- 7 A. Effort if you're defining an order and
- 8 administration that took time. But all the effort
- 9 is to get him into a room, get him evaluated, try
- 10 to get vital signs, that's all part of the effort
- 11 to prepare to decide what sedation should be used,
- 12 what medical therapy should be administered.
- 14 the emergency severity index triage flow chart?

Are you -- at your hospital do you use

- 15 A. The EST scores. Yes.
- A. The ESI scores. Yes.
- 16 Q. What is that for our benefit?
- 17 A. It's typically a way that nurses triage
- 18 patients in certain categories based on certain
- 19 criteria. Five being the least acute. One being
- 20 the most acute.
- 21 MR. EDWARDS: Bobbie, before we go on
- 22 this article by Dr. Hick is our No. 17 and should
- 23 be marked as the next exhibit.
- 24 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

- 4 125
 1 WAS MARKED AS EXHIBIT NO. 10 TO THE TESTIMONY OF
 - 2 THE WITNESS AND IS ATTACHED HERETO.)
 - 3 MR. EDWARDS: Then pull out our number
 - 4 48.
 - 5 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
 - 6 WAS MARKED AS EXHIBIT NO. 11 TO THE TESTIMONY OF
 - 7 THE WITNESS AND IS ATTACHED HERETO.)
 - 8 BY MR. EDWARDS:
 - 9 Q. Doctor, is this the index you were
 - 10 referring to that you utilize?
 - 11 A. This is what our nurses utilize in our 12 department as well. Yes.
 - 13 Q. It gives us five categories. Severity
 - 14 one being immediately the lifesaving intervention?
 - 15 A. Correct.
 - 16 Q. And it provides a step by step approach
 - 17 to clinical decision making?
 - 18 A. It does look like it has a step by step
 - 19 sort of protocol or algorithm here. Yes.
 - 20 Q. And it gives -- yeah, okay. It gives an 21 algorithm of -- each step of the algorithm guides
 - 22 the user towards the appropriate questions to ask
 - 23 or the type of information to gather?
 - A. Yes. This looks like it's sort of an

Gary Vilke - December 08, 2017

1 overview of the indexes is what the chapter is 2 defined as. But it gives some data to how to

3 interpret certain aspects.

Q. Now are you aware that Baptist has

adopted this ESI index?

6 A. Can't say I was necessarily aware of it,

7 but it wouldn't surprise me.

Q. You would expect it though; right?

9 A. They usually some sort of a triaging

10 score. It would not be unreasonable.

11 Q. Under the ESI protocol the first

12 question is whether a patient requires immediate

13 lifesaving intervention?

14 A. You're on Page 8 of this -- number eight

15 on the second page of this; is that right?

16 Q. Yes, sir.

17 A. Okay. It's the Figure 2-la ESI Triage

18 Algorithm?

23

5

19 Q. Yes.

20 A. Okay.

21 Q. First question is whether the patient

22 requires immediate lifesaving intervention; right?

A. That's what the box says. Yes.

Q. All right. Then it says a patient needs

1 immediate life-saving intervention if they require

127

129

2 airway, emergency medications, or other

3 hemodynamic interventions and/or any of following

4 clinical conditions: intubated, apneic, pulseless,

5 severe respiratory distress, SPO2 less than 90,

6 acute mental status changes or unresponsive; is

7 that correct?

A. That is what they list in the box on the

9 right.

10 Q. And so Mr. Goode was at 90 percent SPO2;

11 right?

12 A. Right. So that wouldn't qualify him

13 based on that. Correct.

14 Q. What was his SPO2 after triage?

15 A. Well, this a triage algorithm. So at

16 triage he was 90 percent. This is referring to an

17 SPO2 of less than 90. But I don't know what the

18 number was after his triage.

19 Q. Because he wasn't monitored?

A. Because he didn't have a repeated 02 sat

1 done at that point.

Q. He was not monitored; correct?

A. Well, he was being monitored, yes. He

24 was not on a cardiac or pulse ox monitor.

128

20

23

Did Mr. Goode require immediate life-

2 saving intervention under the ESI index?

3 A. It's an interesting index. I've never

4 actually looked at it this closely because it's

5 usually a nursing based treatment. And it must be

6 more of an quideline than an absolute because

7 acute mental status changes could be, you know,

3 anybody who is acutely confused which is half of

9 the drunk and drug intoxicated population in some

10 ERs. So typically a level one would be an acute

11 heart attack, acute stroke, you know, an

12 amputation of an extremity. Typically won't

13 consider him an immediate life-saving intervention

14 type patient. But if you're looking at the words

15 that are in here one could say oh he's an acute

16 mental status change due to his LSD. That's a

17 direct interpretation rather than a use of this

18 which is what the intent is actually meant to be.

19 Q. And that being the case he required

20 immediate life-saving intervention?

21 A. That's what I'm saying I don't think he

22 meets the criteria as these triage scales are

23 typically designed. But, again, I'm not an expert

24 in triage scales or nursing triage.

1 Q. All right. Forget the ESI index. In

2 your opinion did Mr. Goode require emergency

3 medical intervention?

4 A. He required, you know, in the emergency

department evaluation and then treatment based on

6 what the evaluation is. He didn't require an

7 immediate intervention until they had a chance to

8 take a look at him. You know, not like a guy

9 rolling in with a stroke or a stemi that's already

predefined in the pre-hospital setting.

11 Q. Once he was evaluated and you have seen

12 the evaluation, did he require intervention?

13 A. He -- I guess you'd say he required 14 sedation or intervention, sure.

Q. He required supplemental oxygen also;

16 correct?

15

17 A. I don't believe that he required

18 supplemental oxygen at the time he was being

19 evaluated. He required to be sedated and have a

20 chance for a better reassessment.

21 Q. But the way -- did he require

22 supplemental oxygen five minutes before he ceased

23 breathing?

A. Did he require supplemental oxygen five

Gary Vilke - December 08, 2017

1 minutes before when, I missed that?

- Q. That he ceased breathing?
- A. I did not see any indication that he
- 4 required supplemental oxygen at that point either.
 - Q. You don't know because there was nothing
- to tell you one way or another; correct?
- 7 A. Well, there was certainly the
- 8 observation that he was still yelling and
- 9 verbalizing and moving air in and out. Typically
- 10 people who are hypoxic can't breathe or focus on
- 11 breathing and not yelling and screaming. So there
- 12 was some objective data that implied that he was
- 13 moving air appropriately. But no 02 sat
- 14 documented, that's the original question.
- 15 Q. And that observation you just mentioned 16 came from a police officer?
- 17 A. Came from a police officer. Again, some
- 18 person across the hall said he was making noises
- 19 and was alive, and that other staff were hearing
- 20 him yelling and disrupting the emergency
- 21 department.
- Q. Well, you need to go back and look at
- 23 the deposition, Doctor, because when he was
- 24 yelling breathing he was not -- he was still in

- 1 the decontamination room not across the hall?
 - 2 A. I thought she heard him after she was
 - 3 across the hall and through the cracked door. So

131

- 4 I apologize if I misinterpreted that.
- Q. Do you agree or disagree a patient in
- severe respiratory distress or with an SVO2 of
- 7 less than 90 percent may still be breathing but is
- 8 in need of immediate intervention to maintain an
- 9 airway and oxygenation status. This is the
- patient who will require the physician in the room
- 1 ordering medications such as those used for rapid
- 12 sequence intubation or preparing for other
 - 3 interventions for airway and breathing. That's
- 14 from the ESI triage at Page 10. Do you agree or
 - disagree with that?
- 16 A. You got me to the right page, sorry.
- 17 Again, I think earlier we talked about the O2 sat
- 18 as an absolute number has to be put into the
- 19 clinical perspective. I see lots of patients who
- 20 come in with O2 sats less than 90 percent who do
 - l not needs to be intubated or intervened because
- 22 that's where they live. And so I think absolutes
- 23 are not part of a standard thing. It's something
- 24 to consider to assess. But I wouldn't agree with

132

- 1 it if it's an absolute the way this is written.
 - Q. So you disagree with the ESI severity
- 3 index?

2

- 4 A. If the phrase that says a patient in
- 5 severe respiratory distress or with an O2 sat less
- 6 than 90 percent may still be breathing but is in
- 7 need of immediate intervention to maintain an
- 8 airway and oxygen status. Again, there are
- 9 exceptions to that. So if there is further
- 10 language that tells you to use your clinical
- 11 judgment, this is not a replacement for them, I
- 12 would agree with that. But if it's saying
- 13 everybody who has an O2 sat less than 90 percent
- 14 must be -- is in need of an immediate
- 15 intervention, I would disagree with that based on
- 16 my clinical experience.
- Q. Don't you think it's a good idea if you
- 18 get a reading of 90 percent oxygen saturation that
- 19 you take the same course of action and give
- 20 supplemental objection?
- 21 A. I think you need to look at the clinical
- 22 scenario surrounding that number. One, do you
- 23 believe the number if it's real. If it's real do
- 24 they seem to have any respiratory issues? Are

- 1 they cyanotic? Are they having difficulty getting
 - 2 air in? Are they yelling and screaming? So you
 - 3 should take a look at that number with a clinical
 - 4 eye. And then if there's things that show that
 - 5 there might be a respiratory depression, they're
 - 6 not breathing well, they're cyanotic, then you
 - 7 might want to consider oxygen. But across the
 - 8 board I don't think there is a expectation that
 - 9 you immediately put on O2 for somebody who is
 - 10 agitated, combative and had an O2 sat reading
 - 11 that's 90 percent and may not even be accurate.
 - 12 Q. You keep saying -- give me one fact, a
 - 13 fact, that says that disproves the 90 percent
 - 14 range?

15

- A. Well, there's --
- 16 O. One fact?
 - A. I'm trying to answer you. You're
- 18 interrupting me again. I apologize for trying to
- 19 be responsive.
- 20 Q. No, you're not trying to answer. What
- 21 you're doing is you're guessing. I want a fact,
- 22 an indisputable fact that the 90 percent reading
- 23 taken by the nurse, that was Mr. Baker, was
- 24 incorrect, one fact?

5

10

A. In the record there's a notation where

2 there is a zero heart rate. We know that that

- 3 fact is inaccurate, because we know he had a heart
- 4 rate at that time. And so that the monitoring
- 5 equipment was not accurately measuring, that could
- 6 be a fact that would support the O2 sat not
- 7 measuring correctly because the pulse is not
- 8 matching up.
- 9 Q. Is that it? You say that because the
- 10 heart rate is recorded as zero that that
- 11 translates it into the O2 saturation is incorrect;
- 12 is that your answer?
- 13 A. That's a fact that you requested. And
- 14 so that would be consistent with the fact that an
- 15 O2 sat monitor that's not picking up a heart rate
- 16 correctly may not be picking up the 02 sat
- 17 completely as well.
- 18 Q. The only fact that could be to disprove
- 19 the 90 percent is another 02 reading of a
- 20 different level; correct?
- 21 A. If it's obtainable that would certainly
- 22 give you another point. But if you keep getting
- 23 90 percent and zero, you don't keep documenting
- 24 that. You look at it it's not working and you'll

- 135
 1 obtain the sat reading later when you have a more
- 2 calm patient.
 - Q. Was that done?
- 4 A. I don't know if they checked it multiple
- times at the one time they were doing it or not.
- 6 I don't recall the specifics of their attempt to
- 7 get that sat.
 - Q. Was it done after sedation?
- 9 A. After sedation?
 - Q. Sedation.
- 11 A. That was the plan to get him
- 12 reevaluated. But it was not done until he was
- 13 actually more calm which unfortunately was the
- 14 time he went into cardiac arrest.
 - Q. What is the gold standard for
- 16 determining excited delirium in your opinion?
- 17 A. The gold standard? If we're clinically
- 18 defining it, it's basically assessing the patient
- 19 clinically, looking at the characteristics,
- 20 looking at the predisposing factors, we talked
- 21 about the drugs or psychiatric disorders,
- 22 assessing for other possible causes, and then it's
- 23 a clinical based diagnosis. Ultimately, if you
- 24 want to get beyond that, you can do the Deb Mash
- 136
- 1 study with the brain if it happens to come to it.
- 2 But from a clinical perspective it's basically
- 3 looking at the presentation.
 - Q. Doctor, you have testified -- you've
- 5 testified repeatedly that the gold standard was
- 6 ABG testing?
- 7 A. For excited delirium?
- 8 Q. Arterial blood gas.
- 9 A. I know what that it. But it has nothing
- 10 to do with defining excited delirium syndrome.
- 11 Q. What does it have to do with it? It
- 12 deals with the amount of oxygen in the blood;
- 13 right?
- 14 A. An ABG will give you a partial pressure
- 15 of oxygen. Correct.
- 16 Q. That's what you have said is the gold
- 17 standard for terming whether somebody is in
- 18 asphyxia?
- 19 A. I don't believe I've ever said that.
- 20 Q. You don't?
- 21 A. Is in asphyxia, no. It's a measurement
- 22 for hypoxia.
- 23 Q. Okay. Is it the gold standard for
- 24 determining hypoxia?

1 A. It would be the gold standard over an O2 2 sat reading. Yes.

- 3 Q. Was an ABG ordered for Mr. Goode?
- 4 A. I'm assuming you mean prior to his
- 5 cardiac arrest?
- 6 O. Well, yeah. That makes sense.
- A. I'm qualifying it because I can't
- 8 remember if one was ordered later. I did not see
- 9 an ABG ordered on Mr. -- certainly not performed
- 10 on Mr. Goode prior to his cardiac arrest. I'd
- 11 have to double check the orders to see if it was
- 12 actually ordered.
- 13 Q. And if you had had the -- if Dr. Oliver
- 14 had ordered that and you had that test result, we
- 15 would know exactly what his oxygen saturation was,
- 16 would we not?
- 17 A. If he had ordered it, it was obtained
- 18 and completed correctly, we would have the partial
- 19 pressure of oxygen, not his oxygen saturation. We
- 20 would know what that number is. Yes.
- 21 Q. I'm sorry, I meant to ask we would know
- 22 whether or not he was hypoxic?
- 23 A. We would have an objective measure for
- 24 that. Correct.

1 Q. But we don't have that?

2 A. That is correct.

Q. And that's something that should have

- 4 been done, correct, getting an ABG?
- 5 A. At the time of his acute agitation I 6 would say no.
- 7 Q. After he registered a 90 on the pulse
- 8 oximetry, an ABG would have been a real good idea
- 9 to determine whether or not he was hypoxic;
- 10 correct?
- 11 A. If you're talking about ideas versus
- 12 reality, sure an ABG will give you the
- 13 measurement. In the reality that's much harder to
- 14 do than getting an EKG monitor or an IV placed,
- 15 much more unsafe. So the practicality is it's
- 16 absolutely crazy to try to order that in the acute
- 17 setting like this.
- 18 Q. Well, let me read you a quote. And I
- 19 quote, "After adequate physical control is
- 20 achieved, medical assessment should be immediately
- 21 initiated indeed because cardiopulmonary arrest
- 22 might occur suddenly. EMS should be ideally
- 23 present and prepared to resuscitate before
- 24 definitive law enforcement measures are initiated

- 1 when possible. Although, the need for control
 - 2 measures may take precedence. Initial assessment

139

141

- 3 should include vital signs, cardiac monitoring,
- 4 intravenous access, glucose measurement, pulse
- 5 oximetry, and supplemental oxygen, and careful
- 6 physical examination." Agree or disagree?
- 7 A. Well, it should if it's feasible, right.
- 8 That's after the police arrest somebody get him in
- 9 control, that's a paramedic assessment. You're
- 10 doing what you can do. It doesn't mean you're
- 11 going to be successful in doing it. But it's
- 12 certainly all things that should be considered
- 13 based on the physiologic presentation.
- 14 Q. Who wrote that?
- 15 A. I don't know. It could be me for all I
- 16 know.
- 17 Q. It was you. In the Journal of Emergency
- 18 Medicine in 2012 you wrote that; correct?
- 19 A. I'd have to look at it. But it sounds
- 20 like something I could have written, sure.
- 21 Q. And what I read to you is verbatim what
- 22 you wrote about how a patient perceived to be --
- 3 that cardiopulmonary arrest might occur suddenly.
- 24 That's certainly true; right?

140

- A. I agree with that.
- Q. And that these measures should be taken
- 3 which include supplemental oxygen, pulse oximetry,
- 4 cardiac monitoring, glucose measures. You wrote
- 5 that; right?
- 6 A. I just said should be. It's not
- 7 necessarily always feasible or able to be done,
- 8 but sure. In a perfect situation you do all that.
- 9 Q. You know what, in your paper you didn't
- 10 put that qualification in there. You said this is
- 11 what should be done; right?
- 12 A. I didn't --
- 13 Q. You still agree with that?
- 14 A. I haven't read the whole paper and see
- 15 where I qualified it other places or not. But,
- 16 again, the word should is -- it didn't say must or
- 17 requires or has to. It says should. And that's
- 18 implicit that you have to be -- you have to be
- 19 able to do it in order to complete that task.
- 20 Q. All right. Well, let's dissect that.
- 21 You start off by saying after adequate physical
- 22 control is achieved, that's what you're referring
- 23 to, right, getting the patient under control?
- 24 A. Right.

1 Q. When the EMS arrived on the scene

- Mr. Goode was already hogtied and surrounded by
- 3 four or five or six officers; correct?
- 4 A. That's what I'm trying to recall. But
- 5 that sounds familiar that he was already hogtied
- 6 when they arrived.
 - Q. He was not a threat to anyone; correct?
- 8 A. He still has a risk. But he's less of a
- 9 threat being restrained than he was unrestrained.
- 10 Q. Well, if the officers wrote that
- 11 Mr. Goode is no longer a threat he is secure,
 - 2 would you agree?
- 13 A. I agree that he --
- 14 MR. HUSKISON: I object to the form of
- 15 that question.
- 16 BY MR. EDWARDS:
 - O. Go ahead.
- 18 A. I agree that if they say he's secure I'd
- 19 have to defer to the expertise in that and not a
- 20 threat. Again, there's nobody who is a zero
- 21 threat. But he's certainly not as much of a
- 22 threat as he was before. He's appropriate to
- 23 assess at that point.
- Q. He was assessed at that point by Richard

142

Gary Vilke - December 08, 2017

1 Weatherford. Did you read that statement?

- A. I have read the materials earlier. Yes.
- 3 Q. Okay. Did he receive cardiac
- 4 monitoring?

7

- 5 A. He had a rhythm strip done by the 6 paramedic, sure.
 - Q. He got intravenous access; right?
- 8 A. He did do that. Yes.
- 9 Q. He didn't get any glucose measurement?
- 10 A. I don't recall one done in the field.
- 11 But I'd have to double check on that.
- 12 Q. Actually, and Mr. Weatherford did pulse
- 13 oximetry but we don't know what it was; correct?
- 14 A. I believe he tried and couldn't get it 15 to read.
- 16 MR. HUSKISON: Again, this is Berk
- 17 Huskison. I object to the form.
- 18 BY MR. EDWARDS:
- 19 Q. What's the basis -- the report said he
- 20 did an assessment and he put a pulse oximetry on.
- $21\,$ So what is the basis for your statement that he
- 22 tried and could not get a reading?
- 23 A. That if he had gotten a reading he would
- 24 have documented it.

144

- A. If that's what it says there, sure.
- Q. So that was violated by the EMS and the
- 3 hospital; correct?
- 4 A. It says should and --
- 5 Q. No, it doesn't.
- 6 A. The word should was not in that
- 7 sentence?
- 8 Q. Yes, you're correct. It is in the
- 9 sentence. Should include vital signs. And so
- 10 what does should mean?
- 11 A. Should means if you can do it to try and
- 12 do it. It doesn't mean it's an absolute or a
- 13 must. And if there are reasons not to do it for
- 14 safety purposes or practicality, then that is what
- 15 clinical judgment is for.
- 16 Q. Okay. And so if the EMS could not
- 17 perform the assessment the way it should be done,
- 18 then the hospital should do it; correct?
- 19 A. The assessment of the individual, you
- 20 assess the best you can under the circumstances.
- 21 Both parties EMS and hospitals should be doing the
- 22 best assessment they can.
- 23 Q. Right. If the EMS -- for instance,
- 24 somebody who has not been assessed by EMS then it

1 Q. If you don't get a reading, you know

- that you didn't got a mading: gammagt?
- 2 that you didn't get a reading; correct?
- A. I guess that would make sense. If you

143

- 4 don't get a reading, you know that. Yes.
- Q. That's what the EMS did throughout that
- 6 report, if they couldn't get a reading they put no
- 7 reading available or words to that effect. You've
- 8 reviewed that; correct?
- 9 A. I'd have to refresh myself to the
- 10 specifics of it. But they do document that way,
- 11 yeah.
- 12 Q. But the pulse oximetry box was blank,
- 13 didn't say couldn't get a reading; correct?
- 14 A. I'd have to relook at that specifically.
- 15 Q. Well, whatever it says it says, you
- 16 agree with that?
- 17 A. Whatever --
- 18 Q. You don't have any information different
- 19 than what's on the EMS report, do you?
 - A. Was documented is what's documented.
- 21 Yes.

20

- 22 Q. All right. Your writing in the Journal
- 23 of Emergency Medicine in 2012 says supplemental
- 24 oxygen is to be given; correct?

145

- 1 falls upon the hospital to do the assessment;
 - 2 correct?
 - 3 A. That's the next level of care. The hand
 - 4 off will be there and they will do their typically
 - 5 own assessment whether it was done or not by EMS.
 - 6 Q. Okay. And you agree that when a patient
 - 7 comes in in law enforcement restraints -- law
 - 8 enforcement restraints would never be used by a
 - 9 hospital personnel; is that correct? Hard
 - 10 restraints?
 - 11 A. You're talking about handcuffs basically
 - 12 or like shackles?
 - 13 Q. Yes
 - 14 A. By hospital who, employees?
 - Q. Personnel.
 - 16 A. Or security. And many security officers
 - 17 carry handcuffs to use as necessary. They're not
 - 18 a primary source of restraint of somebody as a
 - 19 patient.

- 20 Q. I see. So are you not aware that CMS
- 21 says that the use of law enforcement restraints
- 22 are not considered to be safe appropriate health
- 23 care restraint interventions by use by hospital
- 24 staff to restrain patients?

You said health care, I think health 2 care something else. You're saying that hospital 3 employees should never use handcuffs basically. 4 And I was saying that there are times where

5 security who are hospital employees do use

6 handcuffs, but not as part of patient care as I

7 believe your CMS commentary is referring to.

All right. Are you aware that -- you 9 agree that the hospital is still responsible for

10 appropriate patient assessment in the provision of 11 safe appropriate care to its patient (the law

12 enforcement officer's prisoner). You agree?

13 The hospital employees are going to 14 assess and take care of the patient. It seems

15 like a reasonable statement of what they do. Yes.

16 In the notice of deposition we requested 17 that you bring to this deposition any primary

18 responses showing that LSD can cause excited

19 delirium. What have you brought?

20 I have brought several articles. The

21 one that I think we referred to earlier, the

22 Ronald O'Halloran, Larry Lewman article from 1993

23 Restraint Asphyxiation and Excited Delirium.

While we're on that subject, Doctor, and

1 I will let you go through all of them. On that

2 O'Halloran article was it a reference to footnotes

147

3 26 and 27 for the proposition of LSD?

In what article? Twenty-six and twenty-5 seven out of what article?

The O'Halloran article that you just Q. pulled out?

The O'Halloran article does not have 26 or 27 references. I'm not following what you're asking me.

11 Q. Okay. Was the LSD reference by

12 Dr. O'Halloran where the patient jumped out of a

second story window was under the influence of LSD?

I'm rereading this because -- he jumped 15 through a window. He cut himself. Is that --

Yes. That was the LSD reference that 17

Dr. O'Halloran made in conjunction with excited 18

delirium?

148

20 A. Correct.

21 0. Where the patient jumped out of a window

and was basically killed?

23 Screaming obscenities, talking

24 incoherently and spitting.

And he was hogtied?

It took four adults to restrain him and

3 transport him to the hospital emergency room.

4 he didn't die out of the window. He just got cut

going through a window.

6 Ο. And subsequently died?

Не --Α.

24

7

8 I'm sorry, go ahead.

9 Yeah. He subsequently died, but not

10 from the injuries from his jumping out the window.

11 He was hogtied; correct?

12 He was handcuffed behind his back, soft

13 restraints and hogtied. Yes, he was.

14 MR. EDWARDS: Okay. Let's mark that

15 article, Bobbie, as the next one.

16 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

17 WAS MARKED AS EXHIBIT NO. 12 TO THE TESTIMONY OF

18 THE WITNESS AND IS ATTACHED HERETO.)

19 BY MR. EDWARDS:

20 Doctor, go ahead. What else do you

21 have?

22 Α. Sure. I have an article by

23 Dr. Takeuchi, Ahern, and Henderson. Excited

24 Delirium review.

Yes. And what is it about that article

that is responsive to our request showing that LSD

can cause excited delirium?

They note that in their article that LSD

can cause excited delirium.

You will agree that's not a primary

resource because it's not a primary article?

It's a primary article. It's not a case

report if that's what you're asking. It's an article that references LSD as a etiology for

excited delirium syndrome.

12 Q. It's anecdotal but it is not a case

13 study as you say?

Ο.

14 Case studies are just -- they report a

case. It's not generalized science. It's just

16 what somebody cites, publish and reports.

What does Dr. Takeuchi say about LSD and 18 excited delirium?

19 Basically that methamphetamine, PCP, and

20 LSD have been reported in a few series, but by far

the most prevalent drug of abuse found on 21

22 toxicology screening was cocaine.

Okay, yes. In the reference to the LSD 23

24 is what he's reporting on somebody else's study or

1

2

150 1 case note? It's referring to Dr. O'Halloran's A. 3 paper. Yes. So we're going back to Dr. O'Halloran 5 where the guy jumped out the window and then ultimately died? 7 Went through a window, yes but did not die from the window injury. 8 Ο. The guy that was hogtied? 10 Correct. A. 11 Okay. 12 MR. EDWARDS: Bobbie, mark that one if 13 you will please.

14 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

15 WAS MARKED AS EXHIBIT NO. 13 TO THE TESTIMONY OF

16 THE WITNESS AND IS ATTACHED HERETO.)

17 BY MR. EDWARDS:

18 Q. You have something else, Doctor?

19 A. I have the ACEP White Paper Report on

20 Excited Delirium Syndrome published in 2009.

21 Q. Is that yours?

22 A. That is where I was with an expert panel

23 that published this White Paper. I was part of

24 that.

Q. Well, yeah okay. So can you tell us
anything about the reference to the white paper to
Solution
LSD and excited delirium?

4 A. Well, it just says cases involve 5 stimulant abuse most commonly cocaine, though

6 methamphetamine, PCP, and LSD have also been

7 described.

8 Q. Okay. Described where?

9 A. Described -- well, in the literature we

10 talked about O'Halloran. Although, this is not

11 referenced in the actual paper directly, the

12 O'Halloran paper is referenced in the list of

13 papers reviewed by the task force. And it's also

14 been seen by members of the task force but not

15 necessarily written up as a case report because

16 O'Halloran already wrote it up.

17 Q. So all you can tell us about LSD and

18 excited delirium is the anecdotal mention by

19 Dr. O'Halloran?

20 A. And members of the task force.

21 Q. Who?

22 A. Well, I've seen LSD induced excited

23 delirium as one. But I didn't write up a case

24 report because there was no need to write up a

Q. And what is the reference --

MR. EDWARDS: Bobbie, go ahead and mark

151

153

3 that.

(WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

5 WAS MARKED AS EXHIBIT NO. 14 TO THE TESTIMONY OF

6 THE WITNESS AND IS ATTACHED HERETO.)

7 BY MR. EDWARDS:

Q. What is the reference in that White

9 Paper to LSD?

10 A. I'd have to look if there's an actual

11 reference. I'm not sure if actually referenced

12 each individual aspect. But this is also part of

13 the experience and expertise of the panel on

14 patients -- people who also have had patients with

15 LSD clinically excited delirium diagnosed but

16 never wrote a case report up on it.

17 Q. Well, typically if physicians have an

usual case they like to write it up; correct?

19 A. Some individuals do. But most doctors

20 just treat their patients and go home.

21 O. Well, but that's -- it enhance your

22 professional stature to be push accomplished?

A. It does if you're in academic medicine,

24 sure.

18

152 1 case report at that time.

Q. Did the patient die?

A. That I don't believe so.

Q. Can you -- do you have anymore articles?

MR. EDWARDS: Do we mark that on,

6 Bobbie.

7 THE REPORTER: We did mark that.

8 BY MR. EDWARDS:

Q. Do you have anymore?

10 A. Then I have the Wetli chapter excited

11 delirium in Forensic Science and Medicine Sudden

2 Deaths in Custody.

13 Q. And what was Dr. Wetli's reference to

14 LSD?

15 A. It's probably going to be along a

16 similar line if I recall, that it is a cause of

17 excited delirium.

18 Q. That's a conclusion. What's the fact

19 that supports the conclusion?

20 A. I'm looking at the paper to find exactly

21 where that line was. I apologize for not having

22 highlighted it. It says "Today, the entity is

23 most common among chronic drug users of stimulant

24 drugs such as cocaine and methamphetamine, and

1 sometimes LSD and phencyclidine abusers." But

- 2 there is no reference noted with that comment
- 3 right there.
- Q. Okay. So that's hardly a primary
- 5 source, is it?
- 6 A. Unless he has seen cases of it, he is
- 7 writing it based on his own primary knowledge of
- 8 it.
- 9 MR. EDWARDS: Mark that please, Bobbie.
- 10 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 11 WAS MARKED AS EXHIBIT NO. 15 TO THE TESTIMONY OF
- 12 THE WITNESS AND IS ATTACHED HERETO.)
- 13 BY MR. EDWARDS:
- 14 Q. Doctor, your position that hogtying and
- 15 places a person prone is without physiological
- 16 effect; correct?
- 17 A. It's clinically insignificant
- 18 physiologically.
- 19 Q. Okay. So the studies in which you have
- 20 participated with Chan and Neuman found there was
- 21 a diminution in respiration but it was clinically
- 22 insignificant; is that right?
- 23 A. If you use measuring ventilation
- 24 properties, pulmonary function testings you can

- 155
 1 find small changes in that in different positions.
 - 2 But physiologically based on O2 sats and end tidal
 - 3 CO2 it was not significant or clinically
 - 4 significant.
 - Q. The first one of these studies that have
 - 6 generally been referred to as the Chan studies in
 - 7 which you participated was published in 1997?
 - A. That is correct. Yes.
 - 9 Q. And that is the study that was done for
- 10 the case of Price versus San Diego?
- 11 A. That was the case that initiated the
- 12 desire to look into this area more carefully.
- 13 Q. And tell the jury who funded that study?
- 14 A. The funding to do the study was done by 15 the County of San Diego.
- 16 Q. That was the defendant in the Price
- 17 lawsuit; correct?
- 18 A. That was one of the defendants. Yes.
- 19 Q. And the Price lawsuit arose because a
- 20 man in custody of the San Diego Police Department
- 21 who was hogtied died; correct?
- 22 A. I can't remember if was police -- it may
- 23 have been Sheriff's Department. But he did die in
- 24 a hogtie position.

156

- Q. So the study that was done by you, Chan,
- 2 and Neuman was used in that litigation to defend
- 3 the claim of the plaintiff; correct?
- 4 A. That's study was used during that 5 litigation. Yes.
- 6 THE VIDEOGRAPHER: Counsel, there is
- 7 five minutes left on the disc.
- 8 MR. EDWARDS: You want to switch it now?
- 9 THE VIDEOGRAPHER: Yes, sir, if that's
- 10 possible.
- 11 MR. EDWARDS: Yeah, go ahead.
 - THE VIDEOGRAPHER: This concludes media
- 13 number two. We're going off the record. The time
- 14 is 11:30 a.m.
- 15 (WHEREUPON, A BREAK WAS TAKEN AND THE
- 16 PROCEEDINGS CONTINUED AS FOLLOWS:)
- 17 THE VIDEOGRAPHER: Time back on the
- 18 record is 11:35 a.m. This begins media number
- 19 three.
- 20 BY MR. EDWARDS:
- Q. Doctor, now we started talking about the
- 22 1997 Chan study and let's get a little background
- $23\,$ on that to make sure my understanding is correct.
- 24 You and Dr. Neuman were working with Dr. Chan at

- 157
 1 the time that the County of San Diego funded this
- 2 study; is that correct?
- 3 A. Essentially. Dr. Neuman was the senior
- 4 person on the study. Dr. Chan was the first
- 5 author. He and I were I think chief residents
- 6 when we first started the study and Dr. Neuman was
 - one of our mentors.
- 8 Q. Okay. And the study so the jury will
- 9 understand what we're talking about was on the
- 10 effect of restraint position and positional
- 11 asphyxia; is that correct?
- 2 A. Right. Basically looking at the effects
- 13 on pulmonary function testing of patients in
- 4 restraint positions.
- 15 Q. What the County of San Diego asked you
- 16 to study was whether placing someone prone on
- 17 their stomach in a hogtie could cause
- 18 asphyxiation; right?
- 19 A. That's correct.
 - Q. Okay. And so that's what they funded.
- 21 They funded this study and you and Dr. Chan and
- 22 Dr. Neuman conducted the study; right?
 - A. Basically to objectively evaluate how
- 24 the position affects pulmonary function values.

20

158 159 1 Yes. 1 Correct. Α. 2 Q. How many subjects, that is people, did 2 The accused party; correct? 0. 3 you have in the study? At least one of the accused parties, Did you ask how many subjects? You cut sure. 5 And Dr. Neuman did not disclose that he 5 out there. Q. had conducted the study with the funding of the 6 Q. Yes. 7 Α. Okay. We had 15 subjects enrolled. County of San Diego; correct? People with asthma were excluded from It's disclosed on the paper here. I 9 that study? 9 don't know what he disclosed or talked about in 10 A. In this study, yes. 10 trial. 11 Were any of the people in that study And, again, your conclusion was that the 11 Q. 12 under the influence of drugs? 12 placing of somebody in a prone hogtied position Not the we're -- not in this study. No. 13 while it did decrease to some degree the intake of 13 14 And in this study the results were 14 oxygen, it was not clinically significant; is that 15 ultimately used to defend the City of San Diego 15 correct? 16 which allegedly had caused the death of a hogtied 16 We didn't say the intake of oxygen. We 17 prisoner; correct? 17 said that there were small measurable differences in pulmonary function testing volumes, but it did 18 I think it was County of San Diego. And not impact oxygen or carbon dioxide levels. 19 it was used during the trial I believe as data. 19 20 Ο. Yeah. And who presented the data was 20 So bottom line to the layperson is the 21 Dr. Neuman; right? San Diego Sheriff's Department didn't kill this guy, Mr. Price or whoever, by putting him in a 22 Α. Dr. Neuman was an expert in that case. 23 Yes. hogtie prone position bottom line? 24 24 Q. For the County of San Diego? Didn't cause asphyxiation. 160 161 Right. But he died? 1 conditions that Troy Goode was in at the time of He did die. Yes. 2 his restraint and arrest; correct? Okay. And you've conducted other If you're talking about having LSD 4 studies that support that position through the 4 intoxicated individuals, you are absolutely 5 years; right? 5 correct. A. Correct. 0. You can't recreate the stressors that And it is also correct that you excluded -- well, first of all, Troy Goode would have never by police cause, can you? 9 qualified for any of these studies, would he? Α. Well, the stressors of the position if 10 Using LSD, no. But if he did not use 11 LSD he could have qualified. being arrested and/or resisting and/or being on 12 But you have admitted that all of the drugs, we can't reproduce that. No. 13 studies, however many there are, do not -- did not Well, there are many more components to 14 replicate conditions in the field of a person in stressors on a person being arrested than just 15 excited delirium being arrested by the police; being hogtied and lying there prone; right? 16 correct? 16 There are other potential stressors, 17 A. I think we acknowledged our limitation 17 sure. 18 sections that you cannot exactly reproduce field 18 And those -- you cannot replicate those 0. 19

situations including intoxication by drugs.

20 So none of your studies -- how many have 21 you done?

22 A. Probably in this area of research with 23 positions and restraints about six I think.

Q. And none of those replicated the

somebody being hogtied and put in a prone position

one feels there's stressors, yes. But the idea of

conditions for purposes of your studies?

20 You can't exactly replicate certain 21 aspects of it. Correct.

22 Well, what you've -- you have said --23 and actually you know Dr. Spitz?

I do know Dr. Spitz.

162

Gary Vilke - December 08, 2017

Q. 1 You know Werner Spitz?

Werner, yes. A.

2

- He takes strong issue with your
- 4 conclusions; correct?
- 5 It depends which ones you're referring 6 to.
- 7 Well, let me read you -- let me read you Ο.
- 8 a bit from Spitz and Fisher's medical legal
- 9 investigation of death. This is an authoritative
- 10 treatise, is it not?
- 11 It is a published textbook.
- It's reliable, it's deemed reliable by 12
- 13 forensic pathologists; correct?
- 14 A. Again, it's as reliable as the authors 15 and the editors of that book.
- 16 It's widely used by medical examiners?
- I know the medical examiners do use that 17
- 18 as one of their references, sure.
- 19 Thank you. And Dr. Spitz in talking
- 20 about the Neuman group, which would include you;
- 21 right?
- 22 Α.
- 23 He says, in fact, the Neuman group and
- 24 the conclusion of their study acknowledge that

- 1 was restrained prone in a hogtie for an hour and a
- 2 half, that would mean he was six times restrained
- 3 as long as anybody in any of your tests; correct?
- Α. That would be a correct mathematical calculation, sure.
- 6 And it's also correct that in your
- testing you gave people rest periods in between
- 8 the measurements that you took; right?
- The 15 minutes would be a constant 15
- 10 minutes in the position. There was no rest period
- 11 there. But if you change position for a different
- 12 measurement, there would be a rest period. Yes.
- 13 Okay. And do you agree with Dr. Spitz
- 14 that the international association of chiefs of
- 15 police vehemently opposes the use of prone
- 16 restraint stating that many deaths have occurred
- 17 of individuals who while in police custody have
- 18 been restrained in this position?
- I haven't reviewed the material. I know 19 20 that they recommend at different times of their
- 21 publications putting people on the side position
- 22 thinking that it might be more physiologically
- 23 advantageous. But the reality is those were
- 24 usually done prior to all the research that

163

165

- 1 they had not intended to duplicate the conditions
- 2 under which restraint position deaths had
- occurred. Do you agree?
- To reproduce all of the conditions --
- certainly some of them like the position, but not
- all of the conditions, sure.
- 7 He continues, deaths on gurney
- mattresses, cushioned car seats, or in a restraint
- position on the ground, and on the floor of police
- cars with a contoured surface may have increased
- the abdominal compression had not been addressed
- in their experiment. Agree or disagree?
- 13 Well, some of our experiments were
- 14 actually done on hospital gurneys, so that would
- have addressed that concern particularly. But we
- didn't put people on the contoured floors of the
- back of a police car, that's correct. 17
- 18 Well, let's talk about that. How long
- 19 did any of your studies last?
- 20 Approximately 15 minutes I think was the
- 21 longest duration of somebody in a restraint
- position.
- So if you're correct and I think you're
- 24 right, but even if you're correct that Troy Goode

164 1 supported the physiologically trial.

- Well, we'll talk about that. Actually
- 3 there are a number of California EMS's which
- prohibit the hogtied prone position; correct?
- I don't know if they prohibit the use by
- paramedics. I don't know if they actually
- prohibit the use by law enforcement because that
- would be outside their jurisdiction.
- Well, of course. But the reason -- and
- Orange County is one; right? 10
- That prohibits EMS providers from 11
- putting somebody in a hogtied position?
- 13 Q. Yes. Transporting via hogtied prone
- 14 position? 15 Α. That I don't know. I'd have to look at
- 16 their protocols whether they're allowed to
- transport or not. 17
- 18 Okay. We'll see if we can pull those 0.
- for you. Now, Doctor, you noted in the first 19
 - study Restraint Position and Positional Asphyxia,
- 21 Chan, et al 1997, "It is possible that our
- 22 subjects -- that had our subjects remained in a
- 23 restraint position for a longer period, we may
- 24 have detected more significant alterations in

166

Gary Vilke - December 08, 2017

1 respiratory physiology." Is that correct?

- A. You didn't give me a location. I'm
- 3 trying to find it.
- 4 Q. 585.
- 5 A. That looks like what we have written
- 6 there. Yes.
- 7 Q. Now explain that to the jury what that
- 8 means, what that sentence means?
- 9 A. Sure. It means that when you write a
- 10 research paper and publish it in a peer reviewed
- 11 journal, you have to put down limitations of the
- 12 study, and it's part of the intellectual honesty.
- 13 So this really is just referring to the fact that
- 14 we looked at patients out to 15 minutes. And
- 15 that's the limitation of the study. Could there
- 16 be changes further out, could be. But based on
- 17 the data here if you're asking me to interpret it,
- 18 then the answer would be no. But the paper is
- 19 written with the limitation of the 15 minute
- 20 window.
- Q. What you're saying is that you in one
- 22 study -- other studies were for shorter periods of
- 23 time; correct?
- 24 A. There were other studies with shorter

1 periods of time. Yes.

Q. So the longest period would be 15

167

169

- 3 minutes and Troy Goode was at least six times
- 4 that; right?
- 5 A. Yes. Based on the hour and a half it 6 would be six times the length.
- 7 Q. And what you're acknowledging in your
- B study is that if you left somebody hogtied and
- 9 prone for a longer period, there may have been
- 10 significant alterations in respiratory physiology;
- 11 correct?
- 12 A. Anything is possible. That is what
- 13 we're putting in there. Correct.
- 14 Q. And significant change in alterations in
- 15 respiratory physiology means ability to breathe;
 16 right?
- 17 A. Significant could be statistically
- 18 significant, meaning you would still see -- we saw
- 19 significant changes in the short period of time
- 20 and our change is not clinically significant. So
- 21 could there be more changes, there could be. It
- 22 doesn't mean it would actually impact the ability
- 23 to breathe or ventilate.
 - Q. You don't know, you never tested for a

168

24

- 1 long period -- let me ask this. Did you ever test
- 2 for longer than a 15 minute period?
- 3 A. Nothing that was ever published.
- 4 Correct.
- 5 Q. Did you ever test, publish anything that
- 6 would apply directly to Troy Goode's situation of
- 7 an hour and a half restraint hogtied in prone
- 8 position?
- 9 A. We never had somebody with that
- 10 duration. No.
- 11 Q. You also noted as a qualification to
- 12 this study "It is unlikely that this period of
- 13 exercise would stimulate all of the physiological
- 14 alterations that may occur with struggle and
- 15 agitation. In addition, we did not reproduce the
- 16 effects of trauma or psychological stress that
- 17 often occur with apprehended individuals."
- 18 Did you write that?
- 19 A. Yes, we did.
- 20 Q. Is that accurate?
- 21 A. That's a fair statement based on the
- 22 limitations of the study.
- ${\tt Q.}\quad {\tt Now}$ the studies that you relied upon and
- 24 have relied -- you rely upon in this case and have

- 1 relied upon in all of the cases from Connecticut
- 2 to San Diego and points in between, are your
- 3 studies with Chan and Neuman; correct?
- 4 A. They are part of it. And depending on
- 5 the time -- they're part of my repertoire of
- 6 articles I review and rely on.
- 7 Q. There are a great many articles by
- 8 professionals in the field of forensic pathology
- 9 that disagree with you. You agree with that?
- 10 A. There's a great number? I don't think
- 11 that there's other studies that have disagreed, at
- .2 least not in the great number that you refer to.
- 13 Q. Okay. Well, that's probably a bad word,
- 14 you're right. You are aware of studies that have
- 15 been performed in the prone position by people who
- 15 been performed in the profile position by people with
- 16 weren't employed as expert witnesses in court to
- 17 exonerate police; right?
- 18 A. To my knowledge, sure I don't know what
- 19 all their backgrounds are. But I know studies
- 20 were done by other individuals.
- 21 Q. Are you familiar with the Edgcombe
- 22 article Anesthesia in the Prone Position 2008?
 - A. Edgeco?
 - Q. Edgcombe.

A. I'd to look at it again. Is that one

2 that was used in one of the depositions? I'd have 3 to look in --

- 4 MR. EDWARDS: Bobbie, it's number eight 5 on our list.
- 6 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 7 WAS MARKED AS EXHIBIT NO. 16 TO THE TESTIMONY OF
- 8 THE WITNESS AND IS ATTACHED HERETO.)
- 9 BY MR. EDWARDS:
- 10 Q. Doctor, have you seen this paper before?
- 11 A. I have seen it at some point. Yes.
- 12 Q. For the benefit of us all,
- 13 anesthesiology is another area of medicine which
- 14 is concerned with the position in which a patient
- 15 is placed; is that correct?
- 16 A. They do deal with patient position, yes 17 absolutely.
- 18 Q. Because it can be dangerous to put
- 19 somebody under anesthesia when they're prone;
- 20 right?
- 21 A. That's a very broad statement. You have
- 22 to be careful about fluid volume statuses,
- 23 underlying medical conditions, and position can
- 24 change that. So you want to be aware of all the

1 circumstances.

- 2 Q. So your answer is on a broad brush
- 3 statement is the position that a person is in when

171

173

- 4 under anesthesia can be dangerous; correct?
 - A. It can have physiologic changes that you
- 6 have to manage. I wouldn't call it dangerous if
- 7 that's the idea of evaluating and planning?
- 8 Q. You agree when moving a patient into the
- 9 prone position an almost universal finding is a
- 10 decrease in cardiac index?
- 11 A. Where are you reading that at, I'm
- 12 sorry?
- 13 0. 165.
- 14 A. Thank you. They certainly write that in
- 15 there, yeah.
- 16 Q. And cardiac index measures the amount of
- 17 blood a person's heart is pumping divided by their
- 18 body size; correct?
- 19 A. That is the way the measurement is.
- 20 Yes.
- 21 Q. Okay. And continuing on, the problem of
- 22 IVC -- what is IVC?
- 23 A. The inferior vena cava.
- Q. And that's -- is that an artery that

1 pumps blood, that the heart pumps blood through?

- 2 A. It's a vein that returns blood to the
- 3 heart.
- 4 Q. A vein, okay. And Dr. Edgcombe notes
- 5 that the problem of IVC obstruction is well
- 6 recognized in the prone position. And that's at 7 167.
- 8 A. It says the problem with IVC obstruction
- 9 is well recognized and various methods have been
- 10 attempted to reduce blood loss including use of
- 11 local anesthetic infiltration, spinal and epidural
- 12 anesthesia, and deliberate hypotension. So he
- 13 does make that comment in the full sentence like
- 14 that.
- 15 Q. Okay. And so to put things into
- 16 perspective, this concept of the dangers of
- 17 hogtying in a prone position all interplay with
- 18 heart functioning in your opinion; is that
- 19 correct?
- 20 A. The data has been measured on it has not
- 21 shown that cardiac output, blood pressure, or
- 22 heart rate are impacted by prone position, which
- 23 would be the functionality of the heart.
- Q. So Mr. Goode had no problems with his

- 1 heart to begin with, we talked about that;
- 2 correct?

172

- 3 A. Nothing that was noted on the autopsy.
- 4 Correct.
- Q. And so Dr. Edgcombe, the
- 6 anesthesiologist, is saying that turning a patient
- 7 to the prone position has a measurable effect on
- 8 cardiac -- cardiovascular physiology, the most
- 9 consistent of which is a reduction in cardiac
- 10 index. And that's at 168.
- 11 A. It looks like either -- the best I can
- 12 tell here without having read the whole paper, his
- 3 reference seems to be something he's referring to
- 14 16 patients, reference number 16, which is
- 15 basically changes with prone position during
- 16 general anesthesia. So anesthesia itself had some
- .7 impact on cardiac function. So without going
- 18 through details of it does it apply in this case,
- 19 it's hard to say.
- 20 Q. Okay. Are you looking -- which study
- 21 are you looking at please?
- 22 A. The Edgcombe, Anesthesia in Prone
- 23 Position paper.
 - Q. Well, let me ask it this way, I'm sorry

174

Gary Vilke - December 08, 2017

1 we had a glitch. Dr. Edgcombe is taking the

- 2 position -- he's an anesthesiologist and he is
- 3 written that placing somebody in a prone position
- 4 affects the heart; agree or disagree?
- 5 A. He reports that we talked about earlier
- 6 when moving a position into a prone position an
- 7 almost universal finding is a decrease in cardiac
- 8 index, with the next paragraph talking about
- 9 patients who are under anesthesia.
- 10 Q. Okay. Right. So as a general
- 11 proposition would you say you take issue with
- 12 Dr. Edgcombe, an anesthesiologist?
- 13 A. As I said earlier, I'd have to look at
- 14 the paper that it was referencing there. But it's
- 15 16 patients that are under anesthesia when the
- 16 positions were changed. And I don't know if these
- 17 are 90-year-olds with very stiff vessels or
- 18 80-year-olds, or they're more applicable to
- 19 younger people with more cardiovascular
- 20 responsiveness.
- 21 Q. Okay. Well, look at 168. Dr. Edgcombe
- 22 says: Obstruction of the IVC, the inferior vena
- 23 cava is a well recognized complication of prone
- 24 positioning and is exacerbated by any degree of

1 abdominal compression, leading to decreased

175

177

- 2 cardiac output and increased bleeding, venous
- 3 stasis, and consequent thrombotic complications.
- 4 Do you have an opinion one way or another on
- 5 Dr. Edgcombe's assertion?
- 6 A. I'll break it down because it's a long
- 7 sentence if that's okay. Obstruction of the IVC
- 8 is a well recognized complication of prone
- 9 positioning and is exacerbated by any degree of
- .0 abdominal compression. You know, these are cases
- 11 in which you're operating on people and pushing
- 12 down. It's a different position because you're
- 13 actually doing work that creates bleeding
- 14 disorders or clotting features by adding surgical
- .5 components to it. Leading to decreased cardiac
- 16 output --
- 17 Q. Excuse me, let me interrupt you, Doctor.
- 18 Where in that statement is there any statement
- 19 about a surgical component or pressure on the
- 20 back? Where?
- 21 A. In that very statement, there's nothing
- 22 in that very statement. But he's referring to
 - 3 surgical procedures with anesthesia.
 - Q. Okay. Go ahead. What else do you have

176

24

- 1 to say?
- 2 A. Then it says leading to decreased
- 3 cardiac output and increased bleeding. As far as
- 4 decreased cardiac output, that's been measured in
- 5 non-surgical patients and has not been shown to be
- 6 affected. Again, I'm not sure what he is
- 7 referencing to get that information. But if it's
- 8 older patients with cardiovascular stiffness, more
- 9 calcifications, that is certainly a possibility.
- 10 But in younger otherwise healthy patients similar
- 11 to Mr. Goode, that data hasn't been demonstrated
- 12 in the work that I'm aware of. I've --
- 13 Q. Let me ask you something. Go ahead,
- 14 sorry.
- 15 A. I was trying to finish this, this is a
- 16 long thing. The increased bleeding, venous stasis
- 17 and consequent thrombotic complications, again,
- 18 I'd have to read studies about that how the
- 19 position would actually lead to increased bleeding
- 20 unless you're referring to operating on somebody
- 21 and making cutting aspects that would bleed more.
- 22 Otherwise, putting somebody in a prone position
- 23 shouldn't make somebody bleed.
- Q. Don't you think it's a good idea

- 1 medically that if there's literature out there
 - 2 that is considered to be peer reviewed which
 - 3 states that placing somebody -- a patient in prone
 - 4 position can affect his heart, that it is wise to
 - 5 avoid prone positioning?
 - A. Well, it says that they also affect
 - 7 their bleeding. And I don't think that's a true
 - 8 fact. So just because it's peer reviewed doesn't
 - 9 mean it's applicable to all patients of all types.
- 10 Q. Don't you think that when there is
- 11 reliable literature in medicine saying that the
- 12 prone position can affect the heart, particularly
- 13 the inferior vena cava, it is a good idea to avoid
- .4 placing people in the prone position?
 - A. I would disagree.
- 16 Q. Yes or no?
 - A. I just said I disagree.
- 18 Q. You disagree?
- 19 A. Thank you.
 - Q. You disagree with Dr. Edgcombe. All
- 21 right.

15

17

- 22 A. I disagree with your statement.
- 23 MR. EDWARDS: Bobbie, pull out number
- 24 nine, please.

(WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 1

2 WAS MARKED AS EXHIBIT NO. 17 TO THE TESTIMONY OF

- 3 THE WITNESS AND IS ATTACHED HERETO.)
- 4 BY MR. EDWARDS:
- Q. Doctor, are you familiar with this
- 6 article by Dr. Dharmavaram, et al, from the Loyola
- 7 University Medical Center entitled Effect of Prone
- 8 Positioning Systems on Hemodynamic and Cardiac
- 9 Function During Lumbar Spine Surgery: An
- 10 Echocardiographic Surgery?
- 11 I have seen the study. Yes.
- Study, I'm sorry. Okay. Now let me ask 12
- 13 you about some of his conclusions or their
- 14 conclusions. Hemodynamic changes. What are
- 15 hemodynamic changes by the way?
- 16 Hemodynamic refer to blood based
- 17 changes, usually referring to blood pressure or
- 18 heart rate.
- 19 0. Okay. And blood of course is what
- 20 carries the oxygen to the organs, in particular
- 21 the brain; right?
- That's one of the organs that is Α.
- 23 perfused. Yes.
- 24 And the brain is -- oxygen is a oxygen

- 1 organ, if you will?
 - Α. It certainly likes oxygen. Yes.
- And Dr. Dharmavaram and his colleagues
- concluded hemodynamic changes occur from supine to

179

181

- prone position. And that's at 1392. Do you agree
- or disagree?
- 7 Α. I'm taking a look at what they say. So
- under key points it does say hemodynamic changes
- from supine to prone positioning.
 - Agree or disagree?
 - A. That's what it says there.
- 12 Yes. In your professional opinion do
- 13 you agree or disagree with this conclusion, this
- 14 finding?

10

11

- Under the results they note that there A.
- 16 are no intergroup differences in demographics,
- 17 fluid deficit, baseline hemodynamics or
- 18 differences from supine to prone position were
- 19 noted. So it seem to have a contradiction in the
- 20 results compared to their key point.
- 21 I see. So in so far as this particular
- paper is concerned, you find a basis to disagree
- with those conclusions?
- 24 I'm just saying what they wrote in their

180

- 1 paper. And it seems to contradict to some degree 2 this key points.
- 3 All right.
- 4 MR. EDWARDS: Bobbie, would you pull out
- 5 number 10, please.
- (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 7 WAS MARKED AS EXHIBIT NO. 18 TO THE TESTIMONY OF
- 8 THE WITNESS AND IS ATTACHED HERETO.)
- 9 BY MR. EDWARDS:
- 10 Q. Doctor, are you familiar with this
- 11 Barnett study out of Great Britain?
- 12 Yes. I have seen this before too.
- 13 And can you tell us if you disagree with
- 14 the conclusions?

- 15 Their conclusions are their conclusions. Α.
- 16 I'd have to re-review the details of their study.
- 17 But looking at -- I'd have to review the details
- 18 of their study to say whether I truly agree or
- 19 disagree. There may be some small changes that
- 20 are there that would be agreeable but may not be
- 21 physiologically impactful.
 - Well, let's look at their conclusions.
- 23 And I quote "This study is shown that all three of
- 24 the prone restraint positions tested imposed

- 1 pressure onto the anterior chest wall and
 - restricted lung function. You agree or disagree?
 - I mean they're laying on their stomach,
 - 4 so there would definitely be some pressure on the
 - chest wall. That's just implicit with the
 - 6 position. As far as their commentary on
 - 7 restricted lung function, that's what I'm trying
 - 8 to look at what they did and what their data were.
 - 9 And based on the data they have in Figure 3
 - 10 compared to a seated position, there are some mild
 - changes that you can measure in the three
 - different positions in pulmonary function testing
 - with the caveat that assuming they had done the
 - pulmonary function testing following American
 - 15 Thoracic Society specifications. So if that's the
 - 16
 - case, there are some small changes that they
 - 17 measure.
 - 18 I didn't ask you this but a person -- is
 - there a ACLS protocol for addressing 19
 - 20 supraventricular tachycardia?
 - 21 There are ACLS protocols for addressing narrow complex tachycardias. 22
 - 23 Were any ACLS protocols implemented for 0. 24 Troy Goode?

183 1 with wide complex and tachyarrhythmia with narrow 1 Α. Yes. Which one? complex. 0. The pulmonary -- or pulseless electrical Q. Did Troy Goode present with either 4 activity, the V-fib protocols were implemented in wide -- or what was the other complex? 5 him. Narrow complex. Q. Narrow. Did he present with either of 6 Post coding? Q. 7 Α. Well, yes. That's when you use it. those? If a patient presents to a hospital to A. He had a narrow complex tachycardia. He an emergency department in supraventricular 9 had a sinus tach. 10 tachycardia, should ACLS protocols be implemented? Q. Was the ACLS protocol implemented? 11 If they present in true SVT, then you 11 Α. To treat the underlying issue for that, 12 would treat them as per SVT protocols. One of 12 yes by using sedation. You have a tachyarrhythmia 13 them is the ACLS algorithm for narrow complex 13 that is sinus tach, you would treat the underlying 14 tachycardia. 14 etiology. Okay. Is there an ACLS protocol for Q. Q. The ACLS protocol calls for chemical 16 tachyarrhythmia? 16 sedation? 17 Tachyarrhythmia is the general category, 17 Typically if it's a sinus tachycardia it 18 then they break them down I believe to narrow and 18 falls outside of the true treatment portions of 19 wide complexes. 19 the ACLS protocol. And it falls under the 20 evaluation portion which is identifying the cause Q. Okay. Is there a protocol for 20 21 tachyarrhythmia? and treating that cause. I think I just said I think there's an 22 Okay. 23 overall protocol. But they tend to break them 23 MR. EDWARDS: Bobbie, would you pull out 24 number 49, please. 24 down to the two major categories; tachyarrhythmia 184 185 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT Okay. Doctor, do you have the adult 2 WAS MARKED AS EXHIBIT NO. 19 TO THE TESTIMONY OF tachycardia with pulse algorithm? 3 THE WITNESS AND ATTACHED HERETO.) I do. Yes. 3 Α. MR. GASS: Tim, it would have been nice 4 You do? Ο. 5 if there was copies of all these exhibits provided A. Yes. 6 to all of us today. Okay, sir. Now number one, step one, 7 MR. EDWARDS: Well, I don't know who you these are sequential; right? 8 think is going to do it. I'm not going to do it. Correct. 9 If you want to see these things, Rick, come to the 0. So step one is assess appropriateness 10 deposition. for clinical condition, heart rate typically equal MR. GASS: Tim, the rule provides that to or greater than 150 beats per minute if 11 12 if you're going to have exhibits at a deposition tachyarrhythmia. Did I read that correctly? 13 you're suppose to have copies. It's common Α. A heart rate typically greater than or 14 courtesy and custom to have copies for opposing 14 equal to. Yes, you did. 15 counsel. 15 And then you go to step number two, 16 MR. EDWARDS: We do have copies. We 16 identify and treat underlying cause. What does 17 have them sitting here in Memphis and we have them 17 that mean? 18 there in San Diego. You could have gone. 18 That means if it is -- the MR. GASS: All you had to do was send us 19 tachyarrhythmia is a tachycardia caused by drugs 20 PDFs of them and everybody would have had them. 20 caused by sepsis, caused by fever, caused by 21 MR. EDWARDS: I am not going to go out shock, caused by trauma, you would treat those 22 abounds for you because you can't get your ass to 22 causes and use your clinical judgment and start 23 a deposition, period. the treatment that would be indicated for either

24 of those types of etiologies.

24 BY MR. EDWARDS:

Okay. And it says maintain patient 1

airway; assist breathing as necessary; right?

- 3 Α. Yes, it does.
- And how do you do that?
- Basically if they're breathing and 5
- 6 they're talking and yelling, you take a look at
- 7 their airway and make sure it's patent.
- Okay. And then you give supplemental
- 9 oxygen if hypoxemic; right?
- 10 That is listed there as an option. Yes.
- 11 And how do you determine if a person is
- 12 hypoxemic?
- Α. 13 Either by an O2 sat monitoring or by a
- 14 blood gas.
- Q. Okay. Well, we know he didn't get a
- 16 blood gas. We got an O2 reading of 90 percent.
- 17 Was Troy hypoxemic?
- 18 A. I would not have started oxygen on him
- 19 based on that 02 sat reading. So I would not
- 20 define him as hypoxemic. He has a low normal O2
- 21 sat.
- Low normal? What -- normal is 95 and
- 23 above; correct?
- 24 No. Normal is -- that's -- the mid

- 1 range anywhere from 93 to 97. Sort of up higher
 - 2 is higher. And then 90 to 92 is sort of a low

 - 3 normal. Below 90 is what most people will define

187

189

- as hypoxemic. But you'll see different papers
- 5 referring to different levels depending on how
- they want to look at the data.
- Give me one authority for the
- proposition that 90 is normal -- low normal?
- There are lots of references out there 10 that --
- 11 Q. Give me one?
- 12 We've had numbers of studies we talked
- today that talk about 02 sats greater than 90
- percent or 90 percent or greater as being
- considered normal, below that being hypoxic as
- defined in their method sections.
- Show me one. We had one that said 93, 17
- if it was at 93 you had to start supplementing.
- The EMS from Mississippi say 90 is mild hypoxia
- requiring supplemental oxygen. You disagree with
- 21 that?
- If that's what it says, I'm not going to 22
- 23 disagree with what they say.
- 24 And it says cardiac monitor to identify

188

- 1 rhythm, monitor blood pressure, and oximetry.
- 2 What's involved in a cardiac monitoring?
- Cardiac monitor is placing leads onto
- 4 the body to try to measure the electrical activity
- 5 of the heart.
- And that was not done?
- It was done in the field. It was not
- 8 done at the hospital.
- It should have been done in the 9 Q.
- 10 hospital?
- At some point it should have been done,
- 12 yes. At some point after he calmed down I think
- 13 it would be the time to place the cardiac monitor.
- 14 Yes?
- 15 Are you familiar with the Parkes and
- 16 Carson entitled Sudden death during restraint?
- 17 I'm sorry, who is the author on that?
- 18 MR. EDWARDS: Bobbie, this is our number
- 19 13.
- 20 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 21 WAS MARKED AS EXHIBIT NO. 20 TO THE TESTIMONY OF
- 22 THE WITNESS AND ATTACHED HERETO.)
- MR. GASS: Can you give us the titles 23
- 24 and the names of Exhibit 18 and 19 please.

THE WITNESS: Eighteen is the

- 2 physiologic impact of upper limb position in prone
- 3 restraint. The lead author is Richard Barnett.
- 4 Number 19 is the acute -- I'm sorry, the Adult
- Tachycardia With a Pulse Algorithm put out by the
- American Heart Association in 2015.
- MR. GASS: Thank you, Doctor.
- THE WITNESS: You're welcome.
- BY MR. EDWARDS:
- Q. Are you -- my question was, Doctor, have 10
- 11 you seen this before?
 - Α. I have seen this before. Yes.
- 13 They did five positions? They tested
- five positions' right?
- 15 I'm just refreshing myself with the
- 16 details of it. But that's what it looks like.
- 17 Yes.

12

- 18 Okay. And position five was the one 0.
- close -- was similar to the hogtied position? 19
 - I'm sorry for the delay, I'm just
- 21 looking for the methods and they didn't define it.
- 22 But looks like they have standing -- I'm sorry,
- there's pictures further back. Position two flat 23
- 24 on the floor, supine. Front on the floor, prone.

7

1 Number four was prone restraining staff applying

2 body weight to torso sort of a chicken wing. And

- 3 five is arms and legs restraint in a flexed 4 position. So the four leg lock would be the
- 5 position there. And that's probably you're right
- 6 the closest to the position of Mr. Goode.
- Q. Okay. And then Dr. Parkes and Carson
- 8 conclude that that position you just described
- caused the greatest change in forced vital
- 10 capacity at 137. Is that correct?
- 11 A. Based on their graph Figure 1 that's
- 12 showing the FVC as a percentage of position one it
- 13 is the biggest change, 70 percent of that. So I'm
- just looking at their methodology. So they
- 15 measure theirs with a single force maximum
- 16 exhalation followed by inhalation. That would not
- 17 be standard practice. That's basically -- that's
- 18 not meeting American Thoracic Society measurements
- 19 for reproducibility. But that gives that
- 20 limitation because it doesn't mean that they gave
- 21 a best effort in these positions. They are
- 22 reporting some changes in the FVC and the FEV1 in
- 23 Positions 4 and 5, the ones with the hands behind
- 24 the back.

- In fact, they conclude that restraint
 - 2 positions should be considered a risk factor for

191

193

- 3 sudden death during restraint and that some
- restraint positions are demonstrated to present a
- greater risk to the patient and others. And
- that's at 141.
 - Α. They do write that down there. Yes.
 - You take issue with that?
- I take issue with their methodology. I
- think I already said which can would impact the
- results and therefore the conclusions from that 11
- perspective. And, again, sort of the difference
- between measurable differences and physiologic
- differences. They didn't measure end tidal CO2 or
- 02 sats in these individuals nor checked blood
- 16 gases. So we don't know if there's any changes in
- hypoxia or hypercarbia in this population to say
- that there's actually a risk factor for sudden 18
- 19 death. I think that's why I think it's a leap to
- 20 go to that level.
- 21 One of the patients in the Parkes and
- Carson study there was a 57 percent reduction in
- FEV1 while restrained in the hogtied position?
- 24 And that's at 140.

192

- 1 Right.
 - Is that correct?
- 3 Based on their methodology that I sort
- 4 of quickly looked at --
- Q. I think you said --
- -- it was a single recorded measurement
- 7 or actually to have valid data you need to have
- 8 reproducibility of at least three within 10
- 9 percent. So if they had a bad FEV1 there because
- 10 it wasn't their baseline but it was just a bad
- 11 push and they try to reproduce it, you may have 12 seen different numbers. So without the
- 13 reproducibility this data really isn't -- it's not
- 14 scientifically valid. It is what it is. But you
- 15 can't interpret and say that the 57 percent was
- 16 real because it wasn't reproduced at least twice.
- 17 Don't you think Dr. Parkes and Carson
- 18 thought it was real when they recorded it?
- 19 I don't know what they were thinking
- 20 when they were doing their study. But if they
- 21 designed it correctly they should have had
- 22 American Thoracic Society measurements or a local
- 23 society which is basically reproducing the testing
- 24 parameters to demonstrate that they are valid

1 numbers.

- Are you familiar with the Roeggla,
- 3 R-O-E-G-G-L-A, study on positioning and its effect
- on respirations that came out of Austria?
 - Α. Respiration and cardiovascular
- parameters, yes I'm familiar with that one.
 - And that study --
- MR. EDWARDS: Bobbie, that's number 16,
- 9 would you pull that out.
- 10 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- WAS MARKED AS EXHIBIT NO. 21 TO THE TESTIMONY OF
- THE WITNESS AND IS ATTACHED HERETO.)
- BY MR. EDWARDS:
- Now Dr. Roeggla and his colleagues I
- think it was at the University of Vienna concluded
- that the hobble restraint had a 40 percent
- 17 reduction in forced vital capacity, is that
- 18 correct, sir?
- 19 Looking at their data. Where do you see
- 20 the 40 percent? This is the mini version, so I'm
- really straining the eyes to take a look at it.
- But where are you seeing that 40 percent listed?
- 23 If you'll look under the section on the
- 24 second page called results it says mean FVC,

1 that's forced vital capacity; right?

A. Yes.

2

3

- Q. Decreased by 39.6 percent?
- 4 A. Correct.
- Q. What is forced vital capacity?
- 6 A. That's the amount of air you can blow 7 out over time.
- Q. Why is that -- that's what is recorded
- 9 when you do a pulmonary function test; right?
- 10 A. That is done through pulmonary function 11 testing. Correct.
- 12 Q. And what is the significance of a almost
- 13 40 percent reduction in forced vital capacity?
- 14 A. Same issues with this paper as the other 15 one, they didn't reproduce their data. They only
- 16 had six subjects and they misused their other
- 17 equipment, the Portagres device looking at cardiac
- 18 output. So they -- we know that they misused
- 19 their devices. So it made it very difficult to
- 20 interpret the data here. But a 40 percent
- 21 increase -- or decrease if it was factually real
- 22 would be notable. But there's never been a study
- 23 out there that ever saw anything close to these
- 24 numbers. And when you look at the way they

196

24

1 in your opinion don't know what they're doing?

- A. I think it's actually fairly common
- 3 across the board that there were inherent issues
- 4 beyond my own opinion. It's in the community of
- 5 people who do research in this field that there
- 6 were flaws in this study.
- 7 Q. It also show a very large decrease
- 8 actually 37.4 percent of cardiac output; right?
- 9 A. That was measured based on their blood 10 pressure. Correct.
- 11 Q. Yes. Okay. That's significant, that's 12 clinically significant?
- 13 A. The number is significant. The
- 14 measurement is flawed.
- 15 Q. Right. I understand your position. But 16 assuming that the measurement was accurate, 37.4
- 17 percent in cardiac output is very clinically
- 18 significant; correct?
- 19 A. It would be potentially notable in blood
- 20 pressure changes if was the decrease in output
- 21 suddenly, sure.
- 22 Q. A decrease of mean forced vital capacity
- 23 of 39.6 percent is very clinically significant,
- 24 isn't it?

194 | 1 presented their data it implies that there is

- 2 something physiologically wrong with the way they
- measure things.
- 4 Q. Well, it's rather amazing that all of
- these other studies have something wrong with
- 6 theirs but yours don't. Don't you find that
- 7 strange?
- 8 A. This here if you look at their O2 sat it
- 9 says 97.67 percent. First of all, let me measure
- that in O2 sat at that level. Secondly, it's with
- 1 a the blood pressure of 85 over 54. Sat probes
- 12 don't tend to pick up that carefully at those
- 13 levels. There's a lot of inherent issues with the
- 14 study. The other pieces they used a Portapres
- 15 measuring device that was -- if you look at the
- 16 company it was not designed to be used for
- 17 changing positions but rather to be used in an ICU
- 18 setting or a proned -- on a bed setting so that
- $19\,\,$ you can measure changes over time, not changes in
- 20 position from standing to supine to prone. It
- 21 throws off the way the machine reads on your
- 22 finger. So they used the equipment wrong. So
- 23 that's a criticism of this study.
 - Q. These guys at the University of Vienna

197

195

- 1 A. It could have clinical implications at
 - 2 that level that would you note in measuring oxygen
 - 3 saturation or CO2.
 - 4 MR. EDWARDS: Bobbie, would you pull out
 - 5 Exhibit 15 on the list.
 - 6 MR. GASS: Is this Exhibit 15 or is this
 - 7 your No. 15?
 - 8 MR. EDWARDS: My Number 15 the article
 - 9 is entitled The cardiopulmonary effects of
 - 10 physical restraint in subjects with chronic
 - 11 obstructive pulmonary disease from the Clinical
 - 12 Forensic Medicine.
 - 13 MR. GASS: And is this now going to
 - 14 become Exhibit 22.
 - THE REPORTER: It is Exhibit 22.
 - 16 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
 - 17 WAS MARKED AS EXHIBIT NO. 22 TO THE TESTIMONY OF
 - 18 THE WITNESS AND ATTACHED HERETO.)
 - 19 BY MR. EDWARDS:
 - 20 Q. Have you seen this article, Doctor?
 - 21 A. I have. Yes.
 - 22 Q. And there were eight subjects with COPD
 - 23 placed in the prone, and then the prone restraint
 - 24 position to determine whether physical restraint

198 199 1 was harmful to individuals with pulmonary 1 S-H-I-M-I-Z-U. Am I correct on that? 2 conditions? That I referred to that? 3 A. Right. Q. I thought you had. I could be Is that the purpose of that? 4 incorrect. Eight subjects, yes recruited with COPD. 5 A. I think that may have been one of the And of those eight subjects, three could other experts in this case may have referred to it 7 not tolerate the prone position with risk and I took a look at it. 8 restraints due to a clinical deterioration in Dr. Shimizu --Ο. symptoms; is that correct? MR. EDWARDS: Did I give you the number 10 If I remember correctly, a 67-year-old, 10 on that, Bobbie? 11 a 70-year-old, and a 69-year-old were unable to THE REPORTER: No, you didn't. 11 12 tolerate that position. 12 MR. EDWARDS: Number 14. 13 Q. So the finding of Dr. Meredith and (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 13 14 others -- and let's see. Their finding was that 14 WAS MARKED AS EXHIBIT NO. 23 TO THE TESTIMONY OF 15 for people with a lung condition, specifically 15 THE WITNESS AND IS ATTACHED HERETO.) 16 COPD, the prone position was harmful? 16 BY MR. EDWARDS: For elderly people with significant COPD 17 17 Q. Got it, Doctor? I do. Thank you. 18 the prone position did have some impact on them. 18 Α. 19 Yes. 19 Ο. Have you ever seen this article? I have seen this article before. Yeah. 20 20 Ο. Clinically significant impact; right? Α. 21 For these three individuals they found 21 Ο. And Dr. Shimuzu and et al, in 2014 22 some findings on them. concluded that prone positioning induces 23 You I believe in some of your opinions significant changes in systolic and diastolic 24 have referred to a study done by Dr. Shimizu, 24 function as well as dyssynchrony; right? 200 201 1 They do write that --All these articles we've been talking Cardiac changes from switching from the about are negative on placing patients in a prone 3 supine to prone position? position; is that correct? 4 Α. They do write that in their conclusions. Again, this is -- if you're referring to Do you disagree with that? people with history of heart attacks and ischemic Well, I think that they're looking at 6 heart disease, they have some changes they note. 7 several different groups there. So in the group The normal group really does not have anything 8 that sort of represented our case here there was that would be clinically significant that would be 9 no significant changes. But in other groups that negative towards doing it. But they do note that 10 had history of heart attacks or ischemic heart there are changes that you can measure in these 11 disease without myocardial infarction they did positions. But they don't talk about the 12 find some changes. physiologic impacts of them. 13 Well, actually at Page 3 of 3 they 13 Well, actually this Shimuzu study just 14 indicate in all 90 patients in the study heart says prone positioning induces significant changes 15 rate increased and stroke volume index decreased in systolic and diastolic function as well as 16 with prone positioning resulting in a decrease of dyssynchrony. What is dyssynchrony? 17 cardiac index, cardiac function was switching 17 The heart -- the beating of the heart Α. 18 supine to prone position. So it says that all 90 18 left to right. 19 patients there was a change in the heart rate 19 Okay. Then that doesn't qualify the 20 cardiac index? study group, does it? They said this happens in 21 21 all 90 that they studied. The heart rate they said in Group A went

22

23

But the numbers that they report showing

their changes are comparing all patients -- well,

24 they compare supine to prone. The numbers are

22 from 78 beats per minute to 76 beats per minute.

23 So that would be a change, certainly noting

24 clinically significance. And --

10

13

202
1 certainly not anything clinically significant.

- 2 The heart rate change of six beats is hardly
- 3 measurable. Stroke volume indexes between 30 and
- 4 35 are normal. So there's nothing there that
- 5 would be irregular. There's difference you can
- 6 measure them, but nothing that was clinically
- 7 significant in the normal population. So they're
- 8 noting the changes. They're reporting that. But
- 9 it doesn't show any clinical significance for the
- 10 population in these normal groups. It's just
- 11 telling you patients who have other medical
- 12 histories may have some changes. Even there those
- 13 are not dramatic, but they're notable. And that's
- 14 what they're doing.
- 15 Q. Well, it doesn't do much -- add much to
- 16 medical knowledge to report insignificant changes
- 17 from one position to another, does it?
- 18 A. I think it adds a lot of data. Any
- 19 study that shows changes or no changes if done
- 20 scientifically well is helpful for the medical
- 21 community.
- 22 Q. Okay. And in that regard all of these
- 23 articles that we've been reviewing all note
- 24 adverse changes whether clinically significant or

1 not as a result of the prone position; right?

203

205

- A. That's what I'm saying I don't agree
- 3 with that. You know, heart rate from 70 to 76,
- 4 one could argue the supine position lowers your
- 5 heart rate. Again, those types of number changes
- 6 though statistically significant in reporting
- 7 don't mean that there's actually some clinical
- 8 significance behind it. And that is an adverse
- 9 effect of the position.
 - Q. Doctor, let's switch gears once again.
- 11 A. Do you mind if I ask a quick question
- 12 just for my own planning.

All right.

- 14 A. How long do you anticipate this going on
- 15 just because I blocked out the four hours you paid
- 16 me for, but I wanted to make sure I let people
- 17 know for things I'm pushing off. Just an idea,
- 18 not a push.

Ο.

- 19 Q. I think that we are moving towards a
- 20 conclusion. Another 45 minutes maybe.
- 21 A. Okay.
- 22 Q. Of course it depends on your cohorts
 - there.

23

4

12

24 A. Sure.

204

- Q. You have previously testified that only 1 V
- 2 approximately 10 percent of individuals suffering
- 3 from excited delirium will die; is that correct?4 A. Yeah. Ten, eleven percent. It's in
- 5 that range, yes.6 O. And you wrote in excited delirium
- 7 syndrome etiology identification and treatment and
- 8 current practice in forensic medicine. Was that
- o current practice in foreist medicine. Was t
- 9 last year that you wrote that?
- 10 A. To be honest I'd have to look at the
- 11 reference to determine. I think it was a little
- 12 longer than that. It may have been a few years.
- 13 Q. Can you see this? Is this it?
- 14 A. A textbook. I thought you were
- 15 referring to a binded book. But that still may
- 16 have been a little longer. It may have been
- 17 published last year.
- 18 Q. Okay. So you were contributed. It says
- 19 Gary Vilke and Jason Payne-James wrote on excited
- 20 delirium syndrome etiology identification and
- 21 treatment. That was you?
- 22 A. That's fair, yes.
- 23 Q. Okay. And you relied upon a study by
- 24 Dr. Stratton in 2001 entitled Factors Associated

- 1 With Sudden Death of Individuals Requiring
- 2 Restraint for Excited Delirium. Is that correct?
- 3 A. That would probably be one of the
- 5 MR. EDWARDS: Let me get a number on
- 6 that. Bobbie, this is 43.

references in there, sure.

- (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 8 WAS MARKED AS EXHIBIT NO. 24 TO THE TESTIMONY OF
- 9 THE WITNESS AND ATTACHED HERETO.)
- 10 MR. GASS: Would you somebody give us
- 11 the exhibit number and the title slowly please.
 - THE WITNESS: Exhibit 24 Factors
- 13 Associated with Sudden Death of Individuals
- 14 Requiring Restraint for Excited Delirium. Lead
- 15 author is Samuel Stratton. And it appears to be
- 16 in the American Torress of Brancours Medicine
- 16 in the American Journal of Emergency Medicine,
- 17 Volume 19, May 2001.
- 18 MR. GASS: Thank you, Doctor.
- 19 THE WITNESS: You're welcome.
- 20 BY MR. EDWARDS:
- 21 Q. Doctor, so that study conducted in LA
- 22 County involved people in police custody who had
- 23 been -- who were in a excited delirium state and
- 24 required hobble restraint; is that correct?

A. That sounds correct. I'm about to look

2 at the details. But they were restrained by

- 3 police to be transported by paramedics.
- 4 Q. They were in hogtie restraint; right?
 - A. I'm looking to see if all of them were.
- 6 I know some of them were.
- 7 Q. Well, at Page 188 in Dr. Stratton's
- 8 paper he says all -- well, no, I'll correct
- 9 myself. There were 214 individuals in
- 10 Dr. Stratton's study in Los Angeles County; right?
- 11 A. I'm reading 216 restrained excited
- 12 delirium victims encountered during the study, all
- 13 had been in restrained some form of hobble
- 14 restraint, either loosely (TARP) or tightly
- 15 (hogtied). The TARP technique was used almost
- 16 exclusively after 1996.
- 17 Q. Okay. Of that population of 216, 18
- 18 individuals died?
- 19 A. There were 18 deaths. I think 18 deaths
- 20 were in cardiac arrest while being transported.
- 21 Q. Okay. And those 18 deaths are all
- 22 people restrained in the hogtie for excited
- 23 delirium. And that's at 188; right?
- 24 A. It was surely the hobble restraint. So

1 hogtie implies being close to the hands. It could

207

209

- 2 be loose where there's more movement with the
- 3 legs. But the legs were bound and attached to
- 4 some level.
- 5 Q. Okay. So of the 18 people who died in
- 6 Dr. Stratton's study in LA County, all were
- 7 similarly restrained to the restraint used on Troy
- 8 Goode?
- 9 A. It appears they were of similar 10 positioning, sure.
- 11 Q. And these were all people described as
- 12 being in a state of excited delirium as that which
 - Byou have attributed to Mr. Goode's state; correct?
- 14 A. That is the physiologic presentation of 15 these as well as Mr. Goode. Yes.
- 16 Q. Okay. So we got 216 people in LA County
- 17 being studied by Dr. Stratton in regards to police
- 8 restraints. And 18 of those people died. Am I
- 19 right so far?
- 20 A. I can't determine the details. I think
- 21 18 went into cardiac arrest and died during
- 22 transport. I'm not exactly sure if they actually
- 23 followed everybody through hospitalization. But
- 24 of the ones that happened these happened during

208

- 1 transport and died.
- Q. And all sudden death victims, the 18 in
- 3 the series had been hobble restrained; correct?
- 4 A. In some form of hobble restraint, yes.
- 5 Uh-huh (affirmative response).
- 6 O. That's at 188. So that's LA County.
- 7 And the Stratton study upon which you referenced
- 8 in your publication on excited delirium syndrome
- 9 etiology identification and treatment; right?
- 10 A. I believe it's referenced in there. I
- 11 didn't double check. But I believe it's in there
- 12 if you told me.
- 13 Q. Okay. Two years ago, two years ago, you
- 14 participated in a study on police restraints in
- 15 Canada; is that correct?
- 16 A. I certainly was participating in a prone
- 17 restraint study up there. I'm not sure which one
- 18 you're referring to. But I know I've worked with
- 19 the Canadians on some of their restraints.
- 20 Q. Restraint in police use of force events. 21 Hall, et al, 2015.
- 22 A. Yes. That sounds familiar.
- 23 Q. Okay. I'll get you a copy of it.
- MR. EDWARDS: Bobbie, this is number 44.

- (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 2 WAS MARKED AS EXHIBIT NO. 25 TO THE TESTIMONY OF
- 3 THE WITNESS AND IS ATTACHED HERETO.)
- 4 BY MR. EDWARDS:
- 5 Q. Now this study was published in the
- 6 Journal of Forensic and Legal Medicine. Is that
- 7 correct, Doctor?
- 8 A. That is correct.
- 9 Q. Okay. And you're listed as one of the
- 10 authors; right?
- 11 A. I am.
- 12 Q. Okay. So in this study in Canada, you
- 13 had more than double the amount of individuals
- 14 being studied than Dr. Stratton had had in LA
- 15 County, California; right?
- 16 A. I mean, which part of this study are you
- 17 talking about total consecutive use of force
- 18 events and how many were in prone and not prone
- 19 positions?
- 20 Q. Fair enough. I'll rephrase it. In the
- 21 Canadian study you found that 499 individuals had
- 22 three or more features of excited delirium?
 - A. Yes. Correct.
 - Q. And 86 individuals had six or more

210

Gary Vilke - December 08, 2017

1 features of excited delirium?

- A. I think that is correct as well.
- 3 Q. And so out of this population of almost
- 4 600 people, you had one death; is that correct?
 - A. There was one death in this population.
- 6 Correct.
- 7 Q. And the one death in this population was
- 8 due to cocaine toxicity; correct?
- 9 A. That sounds familiar. Yes.
- 10 Q. And the one individual who died from
- 11 cocaine toxicity was hyperthermic; correct?
- 12 A. I'd have to look at the details. I know
- 13 he was not prone. But I'd have to check if he was 14 hyperthermic. Yes. He had hyperthermia as well.
- 15 Q. So I think I was wrong on my number. I
- 16 think that the group that you were studying was
- 17 closer to 500 than 600. And so out of the 500
- 18 there was one death -- and these were all people
- 19 in Canadian police custody; right?
- 20 A. Correct.
- Q. Okay. And so out of the approximate 500
- 22 people you had one death that was due to cocaine
- 23 toxicity and hyperthermia; right?
- 24 A. That's correct.

IIIC

212

- 1 practices; right?
- 2 A. I actually worked with the authors to
- 3 evaluate the data, not necessarily to study the
- 4 police practices aspect of it.
- 5 Q. So what we have in contrast is we have a
- 6 study by Dr. Stratton in Los Angeles upon which
- $7\,\,$ you rely in your writings that dealt with 214 $\,$
- 8 people, and of those 18 died and everyone was
- 9 hogtied; correct?
- 10 A. They were hobbled or hogtied.
- 11 Q. Yes. And then you contrast that to
- 12 Canada in the study in which you participated for
- 13 the Canadian police that dealt with a much larger
- 14 population about 500, and there were no deaths;
- 15 correct?
- 16 A. If you're talking about -- the 500
- 17 subjects are with three signs of excited delirium
- 18 or more. Typically you would define it the
- 19 tighter definition. You're really looking for
- 20 excited delirium of six or more features. And
- 21 that's a smaller population, but it looks like 86
- 22 patients as well of none of which were hobbled or
- 23 hogtied like you said.
 - Q. So we've got hogtying in the U.S. that

- Q. Now, Doctor, tell the jury how many
- 2 people in the Canadian study were hogtied?
- 3 A. I'd have to read through this. If you
- 4 can point me in the direction it's in there if you

211

213

- 5 know it, great. But I can't recall off the top of
- my head if it's even reported in there.
- 7 Q. Doctor, you know that zero of the
- 8 Canadians were hogtied, none; correct?
- 9 A. Well, that's what I'm looking for. I
- 10 don't remember specifically. So to say I know is 11 sort of unfair. I'm not recalling, so I'm reading
- .2 through it.

- Q. Page 34, Section 5.5.
- A. It says there, yes. Unlike other
- 15 cohorts no individual in our cohort had ankle
- 16 and/or leg restraints connected in a hogtied
- 17 fashion (also known as the position of maximal
- 18 restraint).
- 19 Q. And the reason that is is the entire
- 20 country of Canada bands hogtying by police;
- 21 correct?
- 22 A. I don't know if that's really the case.
- 23 I don't know their policies up there.
- Q. Well, you went up to study the police
- 1 results in deaths; right? And we've got Canada
 - 2 which doesn't allow hogtying, and we've got no
 - 3 deaths in the study; right?
 - A. Well, again, I don't know if Canada does
 - 5 not allow it. You put that into the question
 - 6 there. So I can't agree with the whole statement.
 - 7 But there were only one death in the population of
 - 8 Canada out of the 86 patients with six or more
 - 9 features. And as you pointed out the Stratton
 - .0 study showed that there were the 18 deaths in the
 - 11 population who had the restraints placed.
 - 12 Q. This were no deaths in Canada that were 13 caused by hogtie; correct?
 - 14 A. In this study that would be correct.
 - 15 Q. So how do you explain the fact that in
 - 16 the U.S. where police hogtie and we got 18 deaths
 - 17 among if you say 86 people, and in Canada where we
 - 8 got 500 and we don't have any deaths, how do you
 - 19 explain that?
 - 20 A. Certainly it could be different types of
 - 21 evaluations of the data, types of drugs being
 - 22 used, populations being studied. Those are all
 - 23 things that happen with epidemiologic studies
 - 24 trying to compare one cohort to another. So just

1 to take one study and compare it to another study

- 2 and say all things are equal, scientifically you
- 3 can't do that. But it's something worth taking a
- 4 closer look at at some point if you can get a
- 5 study population to compare with.
- 6 Q. Well, Doctor, the Canadian study is one
- 7 which you designed and participated in?
- 8 A. I participated in it. I didn't actually
- ${\bf 9}\,$ design the methodology. I helped the Canadians
- 10 evaluate their data once they collected it through
- 11 the police department.
- 12 Q. It was your study at least in part;
- 13 right?
- 14 A. I just said that. Yes.
- 15 Q. And Dr. Stratton who did the LA study
- 16 was somebody you whom you put faith because you
- 17 accepted his numbers?
- 18 A. I report what he reported, sure.
- 19 Q. So we got 18 deaths in hogtying in LA
- 20 County, and none in Canada in a much larger
- 21 population. And my question is how do you -- you
- 22 know what Occam's razor is?
- 23 A. I do.
- Q. What's the Occam's razor answer to this

- 1 question?
- 2 A. That the excited delirium syndrome
- 3 killed the people at both sites because that's the

215

- 4 only common thing that's going on with them.
- 5 There's no hogtie up there and somebody died.
- 6 There's 18 down here and all of them had excited
- 7 delirium syndrome, not all of them had a hogtie.
- 8 Q. Wrong. Down here in Dr. Stratton's
- 9 study everyone was hogtied?
- 10 A. Correct. You asked me the Occam's razor
- 11 which means you come up with a single diagnosis
- 12 that covers for all the findings. The only thing
- 13 that was across the board in all 19 deaths was the
- 14 fact that they had a state of excited delirium
- 15 syndrome. Eighteen of them happen to be hogtied.
- 16 But the only thing that covers all 19 is the
- 17 excited delirium presentation.
- 18 Q. It was cocaine in Canada that caused the
- 19 death; right?
- 20 A. Cocaine was involved in the excited
- 21 delirium etiology in that one case, sure.
- 22 Q. And cocaine is by far in a way the
- 23 precipitant of the excited delirium that you say
- 24 results in death; correct?

216

- A. Cocaine is the more common drug along
- 2 with methamphetamine that causes excited delirium.
- Q. It's a stimulant, it's a highly potent
- 4 stimulant; correct?
- 5 A. Cocaine is, yes.
- 6 O. LSD is not; correct?
- 7 A. I think we went through that. It has
- 8 some stimulating qualities. But it's classified
- 9 as a hallucinogen.
- 10 Q. But your information is all anecdotal
- 11 because you have not studied LSD?
- 12 A. I have studied about LSD as part of my
- 13 training in emergency medicine. But I have not
- 14 studied LSD as an individual topic as part of my
- 15 research.
- 16 Q. So let me ask you a different question.
- 17 Since the rate -- how many characteristics of
- 18 excited delirium did Troy Goode have in your
- 19 opinion?
- 20 A. He had I believe at least six of them.
- 21 He had violent behavior. He had tolerance to
- 22 pain, consistent physical activity, not responding
- 23 to police presence. He was defined as having
- 24 human strength, rapid breathing, did not tire

- 1 despite physical activity. He was sweating. He
 - 2 had a etiology and he was delusional. So all
 - 3 those things would be well over that six mark.
 - Q. Okay. So in the Canadian study in which
 - 5 you participated there were 86 persons with six or
 - 6 more markers or characteristics; right?
 - A. Correct.
 - 8 Q. As with Troy Goode; right?
 - 9 A. Correct.
 - 10 Q. So in taking Dr. Stratton's percentage
 - 11 that you relied upon 10 percent of 86 or between
 - .2 eight and nine people statistically should have
 - 13 died?

15

- 14 A. Correct.
 - Q. From excited delirium?
- 16 A. If you used Sam Stratton's numbers
- 17 extrapolate across that population, that should be
- 18 eight or nine. Correct.
- 19 Q. Well, you did. You used his numbers;
- 20 right?
- 21 A. I reported his numbers as the time the
- 22 epidemiologic best numbers that we could tell for
- 23 patients exhibiting those signs. You know, 11
- 24 percent went into cardiac arrest based on his

Alpha Reporting Corporation

218 1 data. 2 So let's take a break now. I'll get my 0. 3 notes together and maybe we can wrap up, okay. Sounds great. Thank you. THE VIDEOGRAPHER: Time off the record 5 is 1:02 p.m. This ends media number three. 7 (WHEREUPON, A BREAK WAS TAKEN AND THE 8 PROCEEDINGS CONTINUED AS FOLLOWS:) 9 THE VIDEOGRAPHER: Time back on the 10 record is 1:09 p.m. This begins media number 11 found. Counsel, you may proceed. MR. EDWARDS: Bobbie, would you pull our 12 13 number 32, please. 14 (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT 15 WAS MARKED AS EXHIBIT NO. 26 TO THE TESTIMONY OF 16 THE WITNESS AND ATTACHED HERETO.) THE WITNESS: For those on the phone it 17 18 looks like it's the National Association of State 19 EMS Officials, National Model EMS Clinical 20 Guidelines, Exhibit 26.

22 1 Otherwise, you know, patients who have received

2 anti-psychotic medication as a chemical restraint
3 must be monitored closely for the potential
4 development of. You can't measure somebody for
5 ataxia because they're restrained. Ataxia is an
6 ambulatory issue. So some of these things are
7 sort of -- sort of odd to be in a thing.
8 But in and of itself it's a reasonable

Are you a member of that association?

National Association of State EMS

BY MR. EDWARDS:

24 Officials, I am not.

22

23

9 set of things to think about for taking care of
10 somebody who is agitated. But, again, I'm not a
11 fan of the never and always type of comments.
12 Q. Well, the reason that -- the reason that

12 Q. Well, the reason that -- the reason that 13 they have here never transport while hobbled or 14 hogtied or restrained in a prone position is a 15 patient safety consideration; right?

A. It is intended to be a safety
consideration but often times will create more
problems trying to switch somebody from a hogtie
position to a non-hogtie position from a scene
safety as well as an individual safety of the
patient perspective.

22 Q. Well, what is it that you say prevented 23 Troy Goode from being taken off his stomach and 24 put on his side or restrained in four point Q. You're familiar with these Model EMS guidelines?

219

3 A. I am not familiar with these either. 4 No.

5 Q. Well, turn over to Page 46. And if you 6 will please take a minute and read to yourself the 7 patient safety considerations.

A. Okay.

9 Q. Are there -- there are one through 10 twelve points in this section. Are there any of 11 these with which you disagree?

A. Disagree versus style I think is your
question. I don't disagree with any of them. But
I don't think that all of them are absolute. It
says patient should never be transported while
hobbled, restrained, or restrained in a prone
position with hands and feet behind the back.
That's their opinion. I think that there are
circumstances where that's sometimes the safest
way to transport somebody.

And so I'm not a big fan of the never

And so I'm not a big fan of the never
aspect of a recommendation or guideline. The
absolutes always make me uncomfortable where I
would tend to disagree with that type of a thing.

221
1 restraints on the stretcher, what prevented that?

A. They had been trying to put him on his
sides a number of times earlier by the paramedic
reports and he kept wobbling back and forth and
spitting and twisting so that he wouldn't stay on
his side. At the hospital the degree of agitation
and behavior would potentially create more harm to
try to switch him out than to just give some
sedation, calm him down, and then have a more
compliant less resistive person to put in that
position when decreasing the risk of harm to the

Q. You know what every authority we have says don't leave somebody in a prone position, yet you may need to put them down in the prone to control them but then get them out; isn't that correct?

19 A. Every single piece, I don't believe 20 that's the case.

individual trying to restrain him.

Q. Did you read Sergeant Price's testimony his report where he said Troy was trying to turn on his side and he, Sergeant Price, held him down on his stomach? Did you read that?

1 A. I don't recall that specifically. I do 2 recall him trying to turn him on his side and he

3 kept spitting back and forth.

4 MR. HUSKISON: This is Berk Huskison and

5 I object to the form of that question.

6 BY MR. EDWARDS:

Q. You didn't read that Sergeant Price

8 prevented Troy from turning on his side; yes or

9 no?

10 A. I may have read that. I don't recall

11 the specifics of his commentary on that.

12 Q. Do you know Sergeant Price's size?

13 A. I would have to look that up. I don't 14 know off the top of my head.

15 Q. Six foot five, 285 pounds, does that

16 sound like Sergeant Price?

17 A. I still would have to look that up.

18 Q. Okay. Orange County EMS policy and

19 procedure for patient restraint -- Orange County

20 is what, is that just above you, it's between LA

21 and San Diego, isn't it?

22 A. That is correct.

23 Q. And their EMS policy for patient

24 restraint says that a patient shall be restrained

1 in a supine position or on their side. Are you

223

225

2 aware of that?

A. I am not.

4 Q. That would be for patient safety,

wouldn't it?

A. The intent of their protocol I'm not

7 sure why they chose that.

Q. Well, all these protocols -- we can

9 agree that the EMS should not be placed in a

0 position of peril; right?

11 A. The EMS should not be placed in a

12 position of peril?

Q. Yes. Right. You don't want the EMS to

14 put themselves in a position of peril; right?

A. We want them to be safe, sure.

16 Q. So once the patient no longer represents

17 a threat, then you turn your attention to the well

8 being of the patient; correct?

19 A. That's reasonable, sure.

20 Q. What is a recovery position?

21 A. The recovery position has been defined

22 by some as taking somebody in a hobble position

3 and rolling them on their side.

4 Q. You testified to that effect -- did you

224

15

1 testify in the Lee versus City of El Monte case?

A. That sounds familiar somewhat. I don't

3 know if it's trial or deposition testimony. I

can't recall specifically.

5 Q. Have you ever testified in court?

6 A. I have. Yes.

Q. How many times?

8 A. Probably about 30 to 40 times maybe.

9 Q. I'm not talking about -- I'm not talking

10 depositions. I'm talking about going into the

11 courtroom?

12 A. Yes. That's what I'm referring to I

13 believe.

14 Q. Is that what you're talking?

15 A. Yes.

Q. So 30 to 40 times you have gone into

17 courtrooms throughout the United States in defense

18 of police departments in hogtying cases?

19 A. No.

20 Q. In fairness you said some of the cases

21 in which you participated in has been medical

22 negligent cases?

23 A. Correct.

Q. And in those cases you testified on

1 behalf of the hospital?

A. Or the plaintiff, depending on the case.

3 Q. Give us the name of a plaintiff where

4 you testified on behalf of?

A. I didn't understand -- you muffled your

6 voice the last bit.

Q. Give us a reference to a case where you

8 testified on behalf of a plaintiff?

9 A. In deposition or trial or both?

Q. Either.

A. I'd have to pull my Rule 26 report. It

12 should be in the back there. I don't have the

13 actual cases listed in front of me.

14 Q. Would it have been within the past four

15 years?

10

16 A. I believe there's some cases in which

17 I've given testimony on a plaintiff's behalf in

18 the last four years.

19 Q. Okay. Were you the director of the San

Diego County EMS for 2003 to 2006?

21 A. That's correct.

Q. And as the director of the EMS would you

23 have had the responsibility, among other things,

24 of approving all protocols for EMS?

226

Gary Vilke - December 08, 2017

1 A. That would be part of my role. Yes.

- Q. And so the protocols for the San Diego
- 3 County EMS in effect for 2003 to 2006 would have
- 4 been approved by you?
- 5 A. At some point, yes. They have a
- 6 rotating approval. So if the previous medical
- 7 director put something through and they're not in
- 8 cycle to be reviewed, it could be a period and
- 9 then at some point you generally reviewed them.
- 10 Q. In other words, you put your stamp of
- 11 approval on whatever was put down as a protocol to 12 be followed by EMS?
- 13 A. That's what I'm getting at, they rotate
- 14 through certain intervals for review. So if it
- 15 had my stamp on it that would be part of my
- 16 review.
- 17 Q. What is a never event?
- 18 A. A never event at least as I understand
- 19 it is a list of things put out -- I can't remember
- 20 if it's CMS or one of the regulatory bodies about
- 21 things that should never happen. Retain foreign
- 22 objects I think it falls in that category.
- 23 There's a list of things that fall into that,
- 24 that's how they define it.

1 number SMDL No. 08-004.

15

18

- 2 MR. GASS: Thank you, Doctor.
- 3 THE WITNESS: It's about five pages.
- 4 BY MR. EDWARDS:
- 5 Q. So a never event is a patient -- a death
- 6 related to a patient in restraints at the
- 7 hospital?
- 8 A. I'm looking for that specifically.
- 9 There you go.
- 10 Q. It's the environmental section, the last
- 11 one.
- 12 A. You're right. It says death/disability
- 13 associated with use of restraints within a
- 14 facility.
- 15 Q. Now, Doctor, I'm trying to sum up here.
- 16 The studies for which you rely to conclude that
- 17 Troy Goode did not die of any asphyxial event were
- 18 all of those studies for which you have been
- 19 involved; is that correct?
- 20 A. And there are other studies that I also
- 21 refer to that I was not involved with that I
- 22 reviewed.
- 23 Q. In all of the studies in which you were
- 24 involved, Troy Goode would not have qualified for

- Q. One never event promulgated by CMS is a
- 2 patient should never die in restraints; correct?
- 3 A. That I'd have to look. It sounds like a
- 4 reasonable event. But I don't know if that's the
- reality or not in their list.
- 6 THE WITNESS: This is 50, Bobbie. Pull
- 7 that out please.
- (WHEREUPON, THE ABOVE-MENTIONED DOCUMENT
- 9 WAS MARKED AS EXHIBIT NO. 27 TO THE TESTIMONY OF
- .0 THE WITNESS AND IS ATTACHED HERETO.)
- 11 BY MR. EDWARDS:
- 12 Q. Doctor, under Table A, Environment
- 3 Events, death and disability associated with use
- 14 of restraints within facility. You see that?
 - A. I'm working on it.
- 16 MR. GASS: Tim, could you please give us
- 17 the title of what you put in front of the Doctor.
 - THE WITNESS: I'll say it again. It
- 19 probably comes out clearer for me. It's the CMS
- 20 Center for Medicare and Medicaid Services CMS,
- 21 Center for Medicaid and State Operations July 31,
- 22 2008. Really it says for Center for Medicaid and
- 23 State operations, a letter. It says Dear State
- 24 Medicaid Director is the title of it. It's got a
- 228
 - 1 participation; correct?
 - 2 A. That's not correct, unless you're
 - 3 referring to him not being -- I mean, if you're
 - 4 talking about as a person who came off the streets
 - 5 and wanted to participate in a study not on LSD,
 - 6 and acting normal, he could qualify. If you're
 - 7 talking about somebody on the side of the road
 - 8 going crazy with LSD in his system, then no he
 - would not have been able to participate.
 - 10 Q. That's what I'm asking you. That's what
 - 11 we're dealing with, isn't it, this under the
 - 2 influence of LSD?
 - 13 A. Well, I didn't understand if you were
 - 14 talking about his physiology and background with
 - 15 asthma or if you're talking about the LSD
 - 16 components, that's why I wanted to clarify.
 - 17 Q. With LSD influence or cocaine influence,
 - 18 or anything else that somebody might use as a
 - 19 recreational drug, those people would not have
 - 0 been proper subjects for your studies?
 - 21 A. Correct. We could not use somebody who
 - 22 is under the influence at the time of the
 - 23 research.
 - Q. And therefore your studies did not

229

231 1 address people who were in Troy Goode's state at 1 correct? 2 the time of his restraint and ultimately death? 2 A. I haven't done the recent math, but it's They do not involve subjects in the certainly getting to that range. 4 state of excited delirium syndrome or under the Okay. And so, finally, what we have is 5 influence of LSD. That part is correct. a study by Dr. Stratton, et al, in LA where 18 6 people in excited delirium and hobble restrained Q. All right, sir. That's also true of 7 marijuana? Well, I think we said earlier your died out of a population of 200, 215, thereabouts; 8 opinion forthrightly was that marijuana didn't correct? 9 play any part in Mr. Goode's demise? That's about right. Yes. 10 A. Right. I plan to make no opinion on 10 And in contrast your stay in Canada in a 11 that. 11 population of almost 500, no person died, no 12 person died except one for cocaine toxicity; 12 0. Well, you've testified in other cases 13 that marijuana doesn't cause death, haven't you? 13 right? 14 I tend to leave that alone. There are 14 If your definition of the 500 as three 15 some data out there that people think that excited delirium syndrome characteristics or 16 marijuana increase risk of sudden death. I don't 16 greater, than yes. If you're looking at a more 17 have enough knowledge based in that area to opine. refined population, it's a smaller group. 17 18 So I just defer any opinion to somebody else who That's fine. If we use the 86 under 18 19 may want to. 19 Dr. Stratton's study, eight or nine should have 20 Q. Is marijuana legal in your state for any 20 died; right? 21 purposes? 21 If the numbers -- if the populations Is it legal? It is legal for some were similar, the answer would be that would make 22 A. 23 purposes, yes. 23 sense. Yes. 24 Ο. And that's true in 28 other states; 24 Q. But the only difference between those 86 232 233 1 in Dr. Stratton's studies were nobody in Canada 1 Mr. Goode; is that correct? Do you remember that? 2 was hogtied? I do. Yes. 3 That's not the necessarily only And is that opinion to a reasonable Q. 4 difference. Some people in Canada didn't have 4 degree of medical certainty? 5 drugs in their system. There were some potential A. Yes, it is. 6 epidemiologic characteristic differences. But 6 MR. HUSKISON: Thank you. That's all I 7 from a physical restraint component, there was no 7 have. 8 nobody hobbled or hogtied up in Canada. FURTHER EXAMINATION MR. EDWARDS: That's all I have. Thank 9 BY MR. EDWARDS: 9 10 Q. Doctor, it occurs --10 you, Doctor. 11 THE WITNESS: Thank you. 11 MR. EDWARDS: I'm sorry, did I cut 12 MR. PHILLIPS: Does anybody on the phone 12 anybody off? No. 13 haves in for Dr. Vilke? 13 BY MR. EDWARDS: 14 MR. MACAW: No questions for SEP. 14 I think that it would be -- you did a 0. 15 MR. UPCHURCH: No questions. report and a supplemental report; right? 15 16 EXAMINATION 16 Α. Correct. 17 BY MR. HUSKISON: 17 MR. EDWARDS: Bobbie, let's mark both of This is Berk Huskison on behalf of 18 18 those as separate exhibits, please.

22 one I just want to ask you about. You conclude
23 that the prone maximal restraint positioning did

20 Doctor, looking at your expert report you've got

21 several findings, but one of those findings is the

19 Southaven, I just have one quick question.

24 not cause the sudden cardiac arrest and death in

Alpha Reporting Corporation

BY MR. EDWARDS:

21

22

23

(WHEREUPON, THE ABOVE-MENTIONED DOCUMENT

WAS MARKED AS EXHIBIT NO. 28 & 29 TO THE TESTIMONY

Doctor, in one of those, I don't

OF THE WITNESS AND IS ATTACHED HERETO.)

24 remember whether it was the original or the

1 supplemental, you gave an unsupported opinion that

- 2 there was no requirement of one-on-one observation
- 3 of Mr. Goode. Do you recall that?
- 4 A. Sounds familiar.
 - Q. What's the basis for that conclusion?
- 6 A. That agitated individuals in an
- 7 emergency department don't require one-to-one
- 8 observation. They require to be monitored and
- 9 re-evaluated and reassessed. But you don't have
- 10 to have requirement of somebody sitting in the
- 11 room constantly watching that person.
- 12 Q. No, you don't. You can have video,
- 13 can't you?

5

- 14 A. That is another option to use if you 15 want to, sure.
- 16 Q. Yeah. And you can also have remote
- 17 monitoring of the ECG and the pulse oximetry;
- 18 right? You can have that?
- 19 A. Telemetry monitoring is a piece of 20 equipment that is available, sure.
- 21 O. Right. Or you can have somebody who was
- 22 not actually in the room but had a visual on the
- 23 patient?
- 24 A. If you're calling it a one-on-one, they

1 have to have undivided attention. But that's

235

237

- 2 another way of doing it, sure.
- Q. So when you say your opinion that he
- 4 didn't need one-on-one observation by a trained
- 5 medical person is what you're referring to; right?
 - A. Correct.
- 7 Q. You're not saying that he didn't need
- 8 to -- his pulse oximetry didn't need to be
- 9 monitored, are you?
- 10 A. I'm saying that he needed to be
- 11 monitored visually, and that when with either a
- 12 change in status or when he's more calm to then be
- 13 monitored with the more traditional electronic
- 14 monitoring equipment.
- 15 Q. Okay. So your opinion in your report
- 16 was limited to the one-on-one visual by a trained
- 17 medical person?
- 18 A. Somebody in the room is how most people
- 19 define on one-on-one, like an ICU level nursing
- 20 immediately there.
- 21 Q. Okay. And you've looked at the CMS
- 22 guidelines on that, have you?
- 23 A. I have not looked at the CMS guidelines.
- 24 I was referring to practice in a typical emergency

- 1 department.
- Q. Well, one second please. Doctor, I do
- 3 have one other question, it just occurred to me,
- 4 $\,$ I'm sorry. There's so much material here I think
- 5 you can understand it's difficult to cover all the
- 6 basis. But I have one last thing for you. After
- 7 sedation, and I'm talking about in your experience
- 8 since you refer to that a great deal, in your
- 9 hospital people in the excited delirium state who
- 10 have been sedated never died; is that correct?
- 11 A. No. People in excited delirium have 12 died.
- 13 Q. I am quoting from your testimony in the
- 14 case of Lee versus Nashville Metropolitan
- 15 Government where you said you have not had any
- 16 patients in excited delirium die after being
- 17 sedated; true or not?
- 18 A. I have personally had somebody die in
- 19 the process of trying to get them sedated but not
- 20 once they become sedate, no. That would be a true
- 21 statement.
- Q. Okay. So you're talking about somebody
- 23 dying while you're in the process of administering
- 24 the sedative?

- A. Correct. Before they become sedate.
- Q. But thereafter, you haven't had anyone
- 3 pass away?
 - A. Knock on wood, yeah. Correct.
 - Q. Have you had any deaths due to prone
- 6 positioning in your hospital?
- 7 A. To prone positioning at my hospital? I
- 8 don't know the totality of cases at my hospital.
- 9 So I guess it's possible that something have
- 10 happened that somebody died while being in a prone
- 11 position, OR or something like that. But I don't
- 2 know the answer to that.
- 3 Q. Let me ask it a different way. I said
- 14 due to prone positioning. Have you as -- have you
 - had a patient that died while in a prone position
- 16 in your care?
- 17 A. I don't think so. I mean, certainly not
- 18 an agitated or sedated person that way. I'm just
- 19 trying to think of anybody I had to be on their
- 20 stomach for any particular procedure in the \mbox{ED}
- 21 that might have died. And I can't off the top of 22 my head come up with something. The best answer I
- 23 can come up with is I don't recall any. No.
- 4 Q. All right. Have you ever had the

```
239
 1 occasion to report to CMS on death of a patient in
                                                          1 CMS. I would not necessarily know what my
 2 restraints?
                                                          2 hospital has received because all those types of
3
       Α.
            Have I personally? No. Not -- again,
                                                          3 things are determined usually through regulatory
 4 not that I recall from my career that happening,
                                                            and administration. So I am not thinking off the
                                                          5 top of my head of anything that I'm aware of.
 5 no. Has any been reported from our hospital, it's
 6 possible. But I'm not aware of it.
                                                          6 Could there have been an e-mail that came out from
            Are you aware of the requirement under
                                                          7 a chief medical officer at some point in the past
        0.
8 the Code of Federal Regulations that death in
                                                            about something, it's certainly possible. But I'm
9 restraints be reported to CMS?
                                                            not recalling anything off the top of my head.
10
            It's I believe on one of the lists of
                                                         10
                                                                      MR. EDWARDS: Thank you, Doctor.
                                                                      THE WITNESS: Thank you.
11 the things that they have to have to be reported.
                                                         11
                                                                      THE VIDEOGRAPHER: We're going off the
12 I'm familiar with the list. I think that is on
                                                         12
13 there.
                                                         13 record. This concludes the videotaped deposition
14
            Whether they are in law enforcement
                                                         14 media number four. The time is 1:37 p.m.
15 restraints or hospital restraints it has to be
16 reported; correct?
                                                         16
                                                         17
17
            That's what where I think the language
18 does not specify. So I would defer to regulatory
                                                         18
19 to make that decision if that needs to be reported
                                                         19
20 or not.
                                                         20
21
        0.
            Have you ever received any CMS, you or
                                                         21
                                                         22
22 your hospital received any CMS warning letters
23 about operational difficulties?
                                                         23
24
                                                         24
            I have not received any letters from
                                                    240
                 CERTIFICATE
2 STATE OF TENNESSEE
3 COUNTY OF SHELBY
          I, BOBBIE HIBBLER, LCR #029, CSR, Licensed
5 Court Reporter, in and for the State of Tennessee,
   do hereby certify that the above deposition was
 6 reported by me, and the transcript is a true and
   accurate record to the best of my knowledge,
   skills, and ability.
          I further certify that I am not related to
   nor an employee of counsel or any of the parties
9
   to the action, nor am I in any way financially
   interested in the outcome of this case.
10
          I further certify that I am duly licensed
11 by the Tennessee Board of Court Reporting as a
   Licensed Court Reporter as evidenced by the LCR
12
  number and expiration date following my name
   below.
13
          I further certify that this transcript is
   the work product of this court reporting agency
   and any unauthorized reproduction and/or transfer
   of it will be in violation of Tennessee Code
Annotated 39-14-104, Theff of Services
16
17
                      BOBBIE HIBBLER, LCR #029
18
                      Expiration Date 07-01-2018
19
20
21
22
```

Public to the	— 1.7 91:1	1900s 40:2	23 116:1 199:14
Exhibits	10 87:10 125:1 131:14	1980s 39:15	24 80:14 205:8,12
Exhibit 1	180:5 192:8 204:2 217:11	1993 146:22	25 97:3 209:2
Exhibit 2	10:25 111:7	1996 206:16	250 79:11
Exhibit 3	10:33 111:11	1997 10:24 155:7 156:22 165:21	26 147:3,8 218:15,20 225:11
Exhibit 4	11 117:9 125:6 217:23		
Exhibit 5	11:30 156:14	19th 38:9	27 147:3,9 227:9
Exhibit 8	11:35 156:18	1:02 218:6	28 230:24 233:20
Exhibit 9	12 53:12,13,14,16,23	1:09 218:10	285 222:15
Exhibit 10	148:17	1:37 239:14	29 233:20
Exhibit 11	12-lead 52:18 54:9	2	3
Exhibit 12	13 150:15 188:19		
Exhibit 13	137 190:10	2 47:20 52:24 53:6 69:9	3 74:1 181:9 200:13
Exhibit 14	1392 179:5	2-1a 126:17	30 48:6 72:16,23 202:3 224:8,16
Exhibit 15	14 151:5 199:12	20 72:23 116:17 188:21	31 227:21
Exhibit 16	140 191:24	200 231:7	32 218:13
Exhibit 17	141 191:6	2001 204:24 205:17	34 211:13
Exhibit 18	15 113:4 123:6 154:11	2003 225:20 226:3	35 202:4
Exhibit 19	158:7 163:20 164:9 166:14,19 167:2 168:2	2005 48:6	350 8:8
Exhibit 20	197:5,6,7,8	2006 225:20 226:3	36 56:3
Exhibit 21	150 31:11 185:11	2008 169:22 227:22	
Exhibit 22	16 170:7 173:14 174:15	2009 150:20	37.4 196:8,16
Exhibit 23	193:8	2012 139:18 143:23	39.6 194:3 196:23
Exhibit 24	164 73:16,17	2014 199:21	3:17-cv-060-dmb-rp 8:9
Exhibit 25	165 171:13	2015 98:4 189:6 208:21	
Exhibit 26	167 172:7	2017 8:6	4
Exhibit 27	168 173:10 174:21	2018 94:7	4 75:2 88:14 111:13
Exhibit 28	17 50:24 124:22 178:2	2028 56:1	190:23
Exhibit 29	170 31:9	21 193:11	40 78:11 193:16,20,22 194:13,20 224:8,16
	170-pound 80:7	2106 56:2	
0	18 180:7 188:24 — 206:17,19,21 207:5,18,	2139 50:22	43 205:6
08-004 228:1	21 208:2 212:8 213:10,	214 206:9 212:7	44 208:24
	16 214:19 215:6 231:5	215 231:7	45 78:11 203:20
1	1800s 40:2	216 206:11,17 207:16	46 219:5
	188 206:7,23 208:6	22 197:14,15,17	48 125:4
1 8:1 190:11	19 184:2 188:24 189:4 205:17 215:13,16	221 100:22	49 183:24

8:02 8:7 **499** 209:21 184:1 188:20 193:10 acknowledging 167:7 197:16 199:13 205:7 **ACLS** 181:19,21,23 209:1 218:14 227:8 5 9 182:10,13,15 183:10, 233.19 15,19 absolute 80:13 128:6 **5** 87:22 90:18 190:23 **9** 117:12 act 15:11 131:18 132:1 144:12 **5.5** 211:13 **90** 76:21 77:2,13,16,24 219:14 acting 229:6 78:10 113:14 127:5,10, **50** 97:3 227:6 **absolutely** 37:3 46:5 action 61:12,14 132:19 16,17 131:7,20 132:6, 138:16 161:4 170:17 **500** 210:17,21 212:14, 13,18 133:11,13,22 activities 19:2 42:1 16 213:18 231:11,14 134:19,23 138:7 absolutes 131:22 activity 13:4 182:4 186:16 187:2,3,8,13, 219:23 **51** 36:22 188:4 216:22 217:1 14,19 200:14,18 **abuse** 149:21 152:5 201:21 **530** 8:7 actual 151:10 152:11 abusers 154:1 225:13 90-year-olds 174:17 **54** 195:11 abusive 105:6 acute 34:5 45:1 96:9, 92 114:11 187:2 **57** 191:22 192:15 10 104:18 124:19,20 academic 151:23 **92101** 8:8 **585** 166:4 127:6 128:7,10,11,15 accept 33:21 83:12 138:5,16 189:4 **93** 113:4,11 187:1,17, 6 18 acceptable 46:8 acutely 128:8 **95** 50:23 186:22 accepted 11:21,23 add 202:15 **600** 210:4,17 12:3,6 214:17 **96** 114:10 adding 175:14 **60s** 36:12 38:15,17,21 access 34:9 139:4 **97** 187:1 addition 168:15 **67-year-old** 198:10 142:7 **97.67** 195:9 address 67:20 99:8 **69-year-old** 198:11 accompanying 57:11 230:1 **99.9** 26:17 accomplished 151:22 addressed 163:11,15 9:22 69:5 7 account 26:17 addressing 76:14 **9:30** 69:9 181:19,21 accumulates 108:18 **7** 98:15 accurate 30:14 31:14 adds 202:18 **70** 108:2,17 190:13 Α 43:8 54:15 73:21 76:4 203:3 adequate 54:5 138:19 97:12,15,21 133:11 **a.m.** 8:7 69:5,9 111:7, 140:21 **70-year-old** 198:11 168:20 196:16 11 156:14,18 administer 56:20 **70s** 36:12 38:15,17,21 accurately 134:5 **AAFS** 98:4 57:14,23 58:14 70:20 **76** 200:22 203:3 accused 159:2,3 abdominal 60:10,18 **78** 200:22 163:11 175:1,10 **ACEP** 17:13,16,21 administered 32:23 150:19 69:22 77:8 114:13 **ABG** 136:6,14 137:3,9 124:12 8 138:4.8.12 achieved 138:20 140:22 administering 76:8 **ability** 85:17,19,23 **8** 8:6 116:4,5,19 126:14 236:23 167:15,22 acid 20:19 **80-year-olds** 174:18 administration 70:3,7 **abounds** 184:22 acidosis 19:10,14 77:5 124:8 239:4 **80s** 38:13 20:15 122:23 123:17 ABOVE-MENTIONED administrations **85** 77:20 195:11 47:19 73:24 75:1 87:21 acknowledge 162:24 70:24 98:14 116:18 117:11 **86** 209:24 212:21 acknowledged 124:24 125:5 148:16 **admitted** 78:9 160:12 213:8,17 217:5,11 160:17 150:14 151:4 154:10 231:18,24 adopted 9:22 126:5 170:6 178:1 180:6

adult 185:1 189:4 adults 45:13 148:2 advantage 34:9,17 advantageous 164:23 adverse 202:24 203:8 advised 91:5 affect 71:5,7 177:4,6,

affected 176:6 **affects** 157:24 174:4

affirm 9:4

affirmative 208:5

age 36:21

agency 33:16,19

agent 120:16 121:17 122:10

agents 123:11 agitate 93:1

agitated 27:17 28:20 30:9 38:8,18 40:11 45:2 58:22 59:1,4 68:20 71:16 74:14 79:12,19,24 80:3 93:4, 9 104:18 106:1 133:10 220:10 234:6 237:18

agitation 19:13 20:17 49:15 50:8,10 68:8 74:22 76:16 90:23 91:1 92:3,4,6,8,16 93:1,3,7 138:5 168:15 221:6

agonal 22:3 85:23 86:3

agree 20:3,22 23:11
34:12,13,14,18,22
35:6,9,12,16 37:6,8,22
39:14 42:9 61:6 65:11
97:5,6,20 103:22
106:14 108:23 110:17
113:10,17 114:20
116:22 118:11 119:11
120:12 123:8,13 131:5,
14,24 132:12 139:6
140:1,13 141:12,13,18
143:16 145:6 146:9,12
149:6 163:3,12 164:13
169:9 171:8 174:4

179:5,10,13 180:18 181:2 203:2 213:6 223:9

agreeable 180:20

agreed 21:16 35:5,7

ahead 105:12 111:4 141:17 148:8,20 151:2 156:11 175:24 176:13

Ahern 148:23

air 89:16 130:9,13 133:2 194:6

airway 115:5,9 127:2 131:9,13 132:8 186:2,7

alarms 90:12

algorithm 125:19,21 126:18 127:15 182:13 185:2 189:5

alive 24:15 62:20 63:3 64:10 130:19

allegedly 99:3 158:16

allowed 118:20 165:16

alluded 68:16

alterations 165:24 167:10.14 168:14

altered 41:10 48:22 103:16

alternating 64:21 65:2,8,10

alternative 35:17,18

amazing 195:4

Amazon 98:12

ambulance 57:15 58:15 60:3 62:1,10 63:1 64:4 73:11

ambulatory 220:6

American 181:14 189:6 190:18 192:22 205:16

amount 64:18 136:12 171:16 194:6 209:13

amounts 108:7

amphetamine 26:16

amphetamines 39:20 amputation 128:12

and/or 127:3 161:11 211:16

anecdotal 149:12 152:18 216:10

anesthesia 169:22 170:19 171:4 172:12 173:16,22 174:9,15 175:23

anesthesiologist 173:6 174:2,12

anesthesiology 170:13

anesthetic 172:11

Angeles 206:10 212:6

ankle 59:19 211:15

annually 91:2

answering 66:16,22 86:15

answers 46:10

anterior 181:1

anti-psychotic 220:2

anti-psychotics 33:9 40:11,19 76:8

anticipate 203:14

Antonio 13:12 16:2

anxiolytic 114:18

anymore 153:4,9

apneic 127:4

apologize 76:2 82:17 91:3 123:7 131:4 133:18 153:21

apparently 24:15

appeared 24:21

appearing 93:2

appears 29:20 92:14 205:15 207:9

applicability 113:8

applicable 61:23 62:2 174:18 177:9

application 63:9,12,15 81:17

applied 62:11,19 75:23 120:7

apply 62:6 68:5 168:6 173:18

applying 190:1

appreciation 108:4

apprehended 168:17

approach 26:23 110:15 125:16

appropriately 130:13

appropriateness 185:9

approval 226:6,11

approved 226:4

approving 225:24

approximate 210:21

approximately 8:7 56:2 116:17 163:20 204:2

area 10:16 13:14 60:14,15 103:1,2 121:6 155:12 160:22 170:13 230:17

areas 48:16 81:16 114:23

argue 45:15 97:13 203:4

argumentative 105:6

arm 35:20

arms 118:6,7 190:3

arose 155:19

arrest 11:13 12:21 15:14 19:15 21:22 41:5 51:9,11,15 62:23 63:18,22 64:13 65:7,24 66:19,20 67:5,6,7 87:14 88:11,15,20,21 93:24 95:3 96:2,8 104:3 122:24 135:14 137:5,10 138:21 139:8, 23 161:2 206:20 207:21 217:24 232:24

arrested 99:4,7 160:15 161:11.14

arrival 27:20

arrived 27:13,22 55:23 56:1 124:6 141:1,6

arrives 44:16

Arterial 136:8

arteries 95:8

artery 95:7 171:24

article 124:22 146:22 147:2,4,5,6,8 148:15, 22 149:1,4,7,8,10 169:22 178:6 197:8,20 199:19,20

articles 18:4 146:20 153:4 169:6,7 201:1 202:23

artifact 31:6 32:10

aspect 151:12 212:4 219:22

aspects 126:3 161:21 176:21

asphyxia 47:6 81:21 82:7,10,13,19 136:18, 21 157:11 165:20

asphyxial 228:17

asphyxiate 82:22

asphyxiated 63:18

asphyxiation 63:9,11, 15 146:23 157:18 159:24

ass 184:22

asserted 36:8

asserting 122:20

assertion 175:5

assess 48:24 89:18 131:24 141:23 144:20 146:14 185:9

assessed 49:12 64:8,9 85:3 141:24 144:24

assessing 49:6 61:14 62:18 135:18,22

assessment 12:22 29:10,13 49:2,9,20 57:1 62:4 89:14 138:20 139:2,9 142:20 144:17, 19,22 145:1,5 146:10

assessments 54:24

assist 186:2

assisted 79:23

association 164:14 189:6 218:18,22,23

assume 21:4 32:3 57:22 118:4 119:7

assuming 112:12 137:4 181:13 196:16

assumption 119:19

assured 115:6

asthma 96:10,13,17,22 158:8 229:15

ataxia 220:5

Ativan 75:20 114:14, 17,21 116:9,15

attached 8:2 47:21
74:2 75:3 87:23 98:16
116:20 117:13 125:2,7
148:18 150:16 151:6
154:12 170:8 178:3
180:8 184:3 188:22
193:12 197:18 199:15
205:9 207:3 209:3
218:16 227:10 233:21

attachments 45:8

attack 96:10 128:11

attacks 200:10 201:5

attempt 135:6

attempted 29:9 47:5 101:11 172:10

attendant 92:21

attention 223:17 235:1

attorney 88:4

attributable 37:24 38:18 39:17

attributed 37:11 207:13

audio 116:12

Austria 193:4

author 74:24 93:11 157:5 188:17 189:3 205:15

authored 88:1 93:18

authoritative 17:5,11, 22 18:9 25:18 162:9

authority 122:9,19 187:7 221:14

authors 94:15 98:23 162:14 209:10 212:2

autopsies 13:23 103:11

autopsy 11:9 13:21 16:11 99:21 101:14 106:14,23 108:11 173:3

availability 118:17

avoid 27:3 118:8 177:5,13

avoiding 26:23

aware 9:18,24 10:1 13:10 16:4 29:12,14 33:12 41:16 42:19 43:16 45:16 46:22 47:24 48:19 51:14 69:23 70:9 76:17 98:5 107:8,17,23 108:16 124:4 126:4,6 145:20 146:8 169:14 170:24 176:12 223:2 238:6,7 239:5

awareness 41:20 43:4,7,21 44:8,10

В

back 21:1,7 38:9 61:12 62:1,10,11,24 64:4,17 69:8 85:6 97:3 111:10 114:12 119:9,14,20 130:22 148:12 150:4 156:17 163:17 175:20 189:23 190:24 218:9 219:17 221:4 222:3 225:12

background 22:24 36:20 59:7 156:22 229:14

backgrounds 169:19

bad 103:23 104:12 169:13 192:9,10

bag 23:15

Baggett 23:20 86:9,11, 16,19 89:7,19

Baker 133:23

bands 211:20

Baptist 45:14 84:22 119:4,5,8,18 126:4

Barnett 117:4 180:11 189:3

Barnhart 16:20,24 101:13 107:10,18

based 22:17,18,20 37:21 49:21 53:11,24 68:10 74:24 80:17 81:14 88:7 102:17 105:14 106:21,24 113:2 124:18 127:13 128:5 129:5 132:15 135:23 139:13 154:7 155:2 166:16 167:5 168:21 178:16 181:9 186:19 190:11 192:3 196:9 217:24 230:17

baseline 179:17 192:10

basic 23:1 86:7,13

basically 22:1,15 52:3 70:22 76:24 78:14 81:23 85:24 88:23 89:2,16 106:16 135:18 136:2 145:11 146:3 147:22 149:19 157:12, 23 173:15 186:5 190:17 192:23

basis 103:8 120:3,20 121:11 142:19,21 179:22 234:5 236:6

bath 26:7 bean 80:7

beat 22:2,7

beating 13:1 201:17

beats 185:11 200:22 202:2

bed 195:18

bedside 50:22 51:16, 23,24 52:15

begin 23:15 173:1

begins 69:9 156:18 218:10

behalf 225:1,4,8,17 232:18

behave 15:11

behaving 54:10

behavior 53:24 67:2 76:16,23 78:24 97:9 216:21 221:7

behavioral 32:24

behaviors 19:2 25:23 37:13,14

Bell's 40:4

beneficial 19:19 20:8

benefit 45:5 80:7 124:16 170:12

bent 21:7

benzodiazepine 114:18

benzodiazepines 33:8 115:2

Berk 142:16 222:4 232:18

Berkley 9:1

Bexar 13:12

big 20:16 92:2 219:21

biggest 190:13

binded 204:15

binding 33:21

biomarker 106:11 107:21 108:12

bit 21:14 120:13 162:8 225:6

black 69:24 70:22 73:23

blank 143:12

bleed 176:21,23

bleeding 175:2,13 176:3,16,19 177:7

blipping 90:8

bloated 31:16

blockages 95:7

blocked 203:15

blood 14:20 51:22 60:11 64:10 72:13,21 73:3,8,10,11,18,19 78:23 95:21 112:9 136:8,12 171:17 172:1, 2,10,21 178:16,17,19 186:14,16 188:1 191:15 195:11 196:9,

bloodstream 114:4

blow 194:6

blue 22:10

BMI 80:14

board 13:15,17 133:8 196:3 215:13

Bobbie 47:12,13 90:17 98:9 100:10 111:12 115:24 117:9 124:21 148:15 150:12 151:2 153:6 154:9 170:4 177:23 180:4 183:23 188:18 193:8 197:4 199:10 205:6 208:24 218:12 227:6 233:17

bodies 226:20

body 31:18 80:17 101:10,20 102:18 104:1,9,15 106:2 109:12 171:18 188:4 190:2

book 16:8,14,18 93:14, 15 98:8,10,18,19,22 99:10 104:20 106:4,10 162:15 204:15

books 16:3,6

borderline 60:11

bottom 159:20,23

bounce 72:20

bouncing 105:19

bound 21:6,7 42:2 207:3

box 69:24 70:22 73:23 126:23 127:8 143:12

bradycardic 65:22 66:24 67:2,3,5

brain 14:20 106:17 107:1,8,14,23 108:3,18 136:1 178:21,24

break 69:2,6 91:23 111:2,8 156:15 175:6 182:18,23 218:2,7

breathe 24:8,9 74:13 130:10 167:15,23

breathing 71:6,8,15, 24 85:22,23 86:1,3 89:4,16 115:9 121:15 129:23 130:2,11,24 131:7,13 132:6 133:6 186:2,5 216:24

bridge 19:6

bridging 95:8

bring 146:17

bringing 20:8

Britain 180:11

broad 170:21 171:2

broader 120:13

brochure 98:4

brought 146:19,20

brush 171:2

brutality 98:22

bugging 24:16

building 20:19

buildings 37:16

butt 35:20

butting 25:15

C

cadence 22:14

calcifications 176:9

calculated 80:14

calculation 164:5

California 8:8 9:14 165:3 209:15

call 52:10 116:24 171:6

called 51:1 193:24

calling 234:24

calls 183:15

calm 32:18 33:9 68:9, 14,21 114:19 124:1 135:2,13 221:9 235:12

calmed 22:9 188:12

calming 20:8

Canada 208:15 209:12 211:20 212:12 213:1,4, 8,12,17 214:20 215:18 231:10 232:1,4,8

Canadian 209:21 210:19 211:2 212:13 214:6 217:4

Canadians 208:19 211:8 214:9

candidate 59:5

capacity 190:10 193:17 194:1,5,13 196:22

car 163:8,17

carbon 159:19

cardiac 11:13 12:21 15:14 19:15 21:22 41:5 51:9,10,15 52:18 62:23 63:17,21 64:13 65:6, 14,24 66:3,14,18,19,20 67:5,6,7 87:14 88:11, 20,21 89:24 95:3,6 96:2,8 104:3 122:24 127:24 135:14 137:5, 10 139:3 140:4 142:3 171:10,16 172:21 173:8,9,17 174:7

175:2,15 176:3,4 178:8 187:24 188:2,3,13 194:17 196:8,17 200:2, 17,20 206:20 207:21 217:24 232:24

cardiologists 12:3,4,8

cardiopulmonary 138:21 139:23 197:9

cardiovascular 65:15 173:8 174:19 176:8 193:5

care 11:24 44:16 58:7 104:4 120:4 145:3,23 146:1,2,6,11,14 220:9 237:16

career 238:4

careful 28:8 139:5 170:22

carefully 155:12 195:12

carries 178:20

carry 145:17

cars 163:10

Carson 188:16 190:7 191:22 192:17

case 8:9,11 9:17 11:5 16:21 19:17 20:1 27:10,11 28:23 29:8 32:11 33:6 38:23 41:23 42:8 43:10 46:12,15, 19,23 47:2,4,9,15 48:1 52:21 53:17,22 55:3 57:12 58:7 61:16 62:17,18 63:14 68:1,6 76:11 77:13,14,18,23, 24 82:5 88:17 96:3 99:12 100:20 109:15, 17,18,23 110:3 113:1,9 124:4 128:19 149:8,12, 14,15 150:1 151:16,18 152:15,23 153:1 155:10,11 158:22 168:24 173:18 181:16 199:6 200:8 211:22 215:21 221:20 224:1 225:2,7 236:14

cases 10:10 37:23 43:9 61:9 63:8 70:23 94:21

110:12 152:4 154:6 169:1 175:10 224:18, 20,22,24 225:13,16 230:12 237:8

categories 91:24 92:2 105:15 124:18 125:13 182:24

category 107:18 182:17 226:22

causation 62:23

caused 19:11,14 25:24 38:19 70:24 158:16 185:19,20,21 190:9 213:13 215:18

causing 17:14 19:12 42:7

cava 171:23 174:23 177:13

caveat 181:13

ceased 129:22 130:2

cell 89:20 95:15

cells 95:20 114:5

center 32:22 33:11 83:6 107:14 178:7 227:20,21,22

Century 38:9

certainty 46:4 233:4

certification 13:18

certified 13:15

cetera 97:9 106:5

chain 21:8

chained 42:11

chains 43:13,15

challenging 35:23

Chan 96:16 154:20 155:6 156:1,22,24 157:4,21 165:21 169:3

chance 105:8 113:7 129:7,20

change 22:2 71:5,14, 18 85:20 86:1 88:23,24 89:2,4,9,12,17,23 90:3, 8 128:16 164:11 167:14,20 170:24 190:9,13 200:19,23 202:2 235:12

changed 72:19 174:16

changing 195:17

chapter 126:1 153:10

chapters 16:7

characteristic 232:6

characteristics

15:18,21,22 44:15 92:18,22 93:4,8,10 94:23 100:23 108:10 135:19 216:17 217:6 231:15

characterization 102:8

chart 124:14

check 30:20 50:2,11, 19 51:19 52:12,14 78:3 112:11 137:11 142:11 208:11 210:13

checked 50:4 66:18 73:8,13 135:4 191:15

checklist 44:2

cheek 109:11

chemical 32:18,24 33:2,4,8 57:14,23 58:14 59:2 69:13,14,17 71:21 74:6,12 75:22 76:20 80:22 81:2 111:21 112:8,14,15,20 114:12 183:15 220:2

chemically 84:2

chemistry 37:21 51:14

chest 118:8,21 181:1,5

chicken 190:2

chief 157:5 239:7

chiefs 164:14

chose 102:19 223:7

chronic 153:23 197:10

circulatory 84:13

circumstances 58:14 65:1 77:10 144:20

171:1 219:19

cites 149:16

city 8:12 46:16 47:7,15 48:2 110:2 158:15 224:1

Civil 110:12

claim 156:3

claimed 39:12

clarify 229:16

class 82:23

classification 14:14

classified 102:24 121:20 216:8

clear 87:2,6

clearer 227:19

clinical 15:9 78:5 97:10 107:5 125:17 127:4 131:19 132:10, 16,21 133:3 135:23 136:2 144:15 185:10, 22 197:1,11 198:8 202:9 203:7 218:19

clinically 34:20 72:18 135:17,19 151:15 154:17,21 155:3 159:14 167:20 196:12, 17,23 198:20 200:24 201:8 202:1,6,24

close 112:15 189:19 194:23 207:1

closely 115:6 128:4 220:3

closer 31:11 210:17 214:4

closest 190:6

clot 14:20

clothing 49:20

clotting 175:14

CMS 83:7,16,20 84:1,2, 17 145:20 146:7 226:20 227:1,19,20 235:21,23 238:1,9,21, 22 239:1

CO2 155:3 191:14 197:3

Coast 10:8,9

coasts 10:10

cocaine 26:6,14,16 38:5 39:15,20 121:24 123:11 149:22 152:5 153:24 210:8,11,22 215:18,20,22 216:1,5 229:17 231:12

code 50:24 78:14 238:8

coded 78:12,17

coding 182:6

cohort 211:15 213:24

cohorts 203:22 211:15

coinciding 40:10

collapse 64:22 65:3, 11,13,14,15,19

collateral 57:6,9

colleagues 179:3 193:14

collected 214:10

combative 19:13 27:17 133:10

combativeness 123:9

comfortable 107:4

commenced 55:18,22

comment 91:16 120:8 154:2 172:13

commentary 146:7 181:6 222:11

comments 220:11

common 26:14,16 90:10,24 91:7,9 100:15 101:5 112:22 121:5 122:12 153:23 184:13 196:2 215:4 216:1

commonly 26:3 70:10 122:4 152:5

community 97:17 196:4 202:21

company 195:16

compare 201:24 213:24 214:1,5

compared 59:18 179:20 181:10

comparing 201:23

competent 88:19 107:11

compilation 94:18

complete 140:19

completed 137:18

completely 44:5 49:16,19 134:17

completeness 98:24

complex 90:9 181:22 182:13 183:1,2,4,5,8

complexes 182:19

compliant 221:10

complicating 96:11, 14 102:14

complication 174:23 175:8

complications 17:1,6, 7,12,23 18:2,10 37:24 102:5 175:3 176:17

component 49:16 175:19 232:7

components 121:23 161:13 175:15 229:16

compound 25:12

compression 163:11 175:1,10

concept 11:16 12:13 14:9 82:3,6,7 172:16

concepts 108:5

concern 76:24 163:15

concerned 83:4 170:14 179:22

concerts 37:1,2

conclude 190:8 191:1 228:16 232:22

concluded 179:4 193:15 199:22

concludes 16:10 156:12 239:13

conclusion 123:3,7 153:18,19 159:11 162:24 179:13 203:20 234:5

conclusions 162:4 178:13,14 179:23 180:14,15,22 191:11 200:4

condition 11:22 41:16 49:11 50:9 56:13 77:4 92:14 95:14 185:10 198:15

conditions 94:22 95:2,5,23 127:4 160:14 161:1,19 163:1,4,6 170:23 198:2

conducted 157:22 159:6 160:3 205:21

confinement 118:15

confining 118:12

confrontation 46:24

confused 128:8

confusion 42:7

conjunction 147:18

connected 21:8,9 211:16

Connecticut 88:6 169:1

consecutive 209:17

consensus 97:16,20

consequent 175:3

consideration

consideration 220:15,17

176:17

considerations 219:7

considered 35:22 37:19 59:15,19 60:22 69:17 71:10,12 76:22 77:7,11 96:13 123:17 139:12 145:22 177:2 187:15 191:2

consistent 14:18 15:19 16:1 20:17,18 40:6 67:3 99:23 100:2 106:19 107:2 109:7 134:14 173:9 216:22

consistently 66:3

constant 29:4 164:9

constantly 234:11

consumption 19:19 20:7

contact 27:9

content 120:2

contents 94:13

context 26:13 65:16

continue 123:14,16

continued 19:14 69:7 111:9 123:9 156:16 218:8

continues 163:7

continuing 20:14 73:2 171:21

continuous 115:16

contoured 163:10,16

contradict 28:13

contradiction 179:19

contrary 28:5

contrast 212:5,11 231:10

contribute 96:8

contributed 204:18

control 36:4 59:3 138:19 139:1,9 140:22, 23 221:17

controversial 11:16 97:11,14

controversies 11:18

COPD 197:22 198:5, 16,17

copies 184:5,13,14,16

copy 117:8 208:23

core 101:10,20 102:18 104:9,15 106:2 109:12

corner 68:14,19

coronary 95:7

correct 9:14 10:4,9,12, 14 11:7,8,10,12,17,22 12:16 13:2,6,7 14:5 16:13,23 17:3,17 18:11,12 20:9 22:19,23 23:15 24:8,17 26:18 27:1,22 29:5 30:24 31:13 33:22 35:3,17 36:1,2,5,12 38:1,10 39:2,7,23 40:23 41:7, 15 42:3 44:18 45:7,11 46:8 48:7 50:17 51:13 52:6 53:2,15,20 54:23 56:4,5,6,12 57:19 58:1, 15 59:3,12 60:4 61:3 69:15,21 70:4 71:6 73:2,12 75:10,11,20 77:8 78:7,23 79:2,7 80:24 81:21 82:9 83:18 84:3,23 88:12,16 89:1 90:1,4 91:13 92:11 93:9 94:5,24 95:16 96:18 99:5 100:7,14 101:2,9,24 103:12 104:14 105:4 108:13, 24 110:13,21 111:21 112:3,9,13,24 113:14 114:15 115:15,21 122:7,10 123:22 125:15 127:7,13,22 129:16 130:6 134:20 136:15 137:24 138:2,4, 10 139:18 141:3,7 142:13 143:2,8,13,24 144:3,8,18 145:2,9 147:20 148:11 150:10 151:18 154:16 155:8, 17,21 156:3,23 157:2, 11,19 158:17 159:1,2, 7,15 160:6,7,16 161:2, 5,21 162:4,13 163:17, 23,24 164:3,4,6 165:4 166:1,23 167:11,13 168:4 169:3 170:15 171:4,18 172:19 173:2, 4 185:8 186:23 190:10

192:2 193:18 194:4,11 196:10,18 198:9 199:1 201:3 204:3 205:2,24 206:1,8 207:13 208:3, 15 209:7,8,23 210:2,4, 6,8,11,20,24 211:8,21 212:9,15 213:13,14 215:10,24 216:4,6 217:7,9,14,18 221:18 222:22 223:18 224:23 225:21 227:2 228:19 229:1,2,21 230:5 231:1,8 233:1,16 235:6 236:10 237:1,4 238:16

correctly 13:1 29:22 44:12 134:7,16 137:18 185:12 192:21 198:10

counsel 8:15 9:19 10:19 69:10 102:8 111:11 156:6 184:15 218:11

country 107:16 211:20

County 9:14 13:11 155:15 157:1,15 158:18,24 159:7 165:10 205:22 206:10 207:6,16 208:6 209:15 214:20 222:18,19 225:20 226:3

court 8:10 9:3 48:16 169:16 224:5

courtesy 184:14

courtroom 224:11

courtrooms 224:17

cover 98:21 236:5

covers 215:12,16

cracked 131:3

cramped 30:10

crazy 37:15 138:16 229:8

create 49:17 105:19 114:9 123:16 220:17 221:7

created 25:23 98:21 116:11

creates 175:13

criteria 14:14 57:17 58:18,19 107:1 124:19 128:22

criticism 195:23

cuffs 30:10

current 204:8

cushioned 163:8

custody 10:7 14:17 39:7,11 64:6 94:1 102:22,23 153:12 155:20 164:17 205:22 210:19

custom 184:14

cut 59:18 60:16 147:16 148:4 158:4 233:11

cutting 176:21

cyanotic 133:1,6

cycle 64:21 65:2,10 226:8

D

D-E-I-T-C-H 74:19

dangerous 170:18 171:4,6

dangers 119:10 172:16

Darrell 94:3

data 26:7 126:2 130:12 158:19,20 166:17 172:20 176:11 181:8,9 187:6 192:7,13 193:19 194:15,20 195:1 202:18 212:3 213:21 214:10 218:1 230:15

date 8:6 48:3 94:7

David 119:24

day 38:2

days 63:14,19,22

de 70:24

dead 22:4 36:23 51:3, 5,7

deal 170:16 236:8

dealing 111:19 229:11

deals 136:12

dealt 212:7,13

Dear 227:23

death 11:6 13:21,24 14:2,10,19,22 15:1,12, 13 16:10,12 17:1,6,12, 14,24 18:11 19:3,8 21:16,18,23,24 25:19 26:23 27:3 31:18 34:2 37:10 38:18,19,22 39:5,8 40:9 47:6 50:15, 20 61:18,21,24 62:3,7 63:9,11,14 64:20,21 65:1,9 94:23 95:14,24 96:6 99:14,15,18,22 100:1 101:6,24 102:13, 22 103:4,5,7,9,20,21 106:20 109:20 123:12 158:16 162:9 188:16 191:3,19 205:1,13 208:2 210:4,5,7,18,22 213:7 215:19,24 227:13 228:5 230:2,13, 16 232:24 238:1,8

death/disability 228:12

deaths 10:8,14 37:5 38:6,8,14 39:10,17 70:2,5 93:24 94:1 100:14,15 101:2 153:12 163:2,7 164:16 206:19,21 212:14 213:1,3,10,12,16,18 214:19 215:13 237:5

Deb 107:9,24 135:24

December 8:6

decide 124:11

decision 48:4 125:17 238:19

decontamination 131:1

decrease 71:17 95:20 159:13 171:10 174:7 194:21 196:7,20,22 200:16 221:12

decreased 175:1,15 176:2,4 194:3 200:15

decreasing 20:11 221:11

deem 57:15 58:1 87:3, 7 94:18 95:23

deemed 52:6 60:8 75:15 162:12

default 14:4.6

defective 13:4

defend 156:2 158:15

defendant 22:19 155:16

defendants 9:2,17,23 155:18

defense 10:6 224:17

defer 141:19 230:18 238:18

deficit 179:17

define 15:8 21:23 44:5 67:10 82:19 113:3 121:22 186:20 187:3 189:21 212:18 226:24 235:19

defined 21:5 113:20 126:2 187:16 216:23 223:21

defines 113:11

defining 61:5 67:16 82:11 112:4 114:1 124:7 135:18 136:10

definition 83:5,10,20 86:22,24 212:19 231:14

definitive 138:24

degree 43:20 46:3 88:22 90:7 159:13 174:24 175:9 180:1 221:6 233:4

Deitch 74:19 111:20 112:7 113:10

delay 189:20

delayed 63:9,11

deliberate 172:12

delirious 19:11 44:11 57:7

delirium 11:12,13,15, 20,24 12:9,13,18,20 14:5,9,15,18,24 15:2,9, 17,19,23 16:3,9,11,12 17:14 19:20 26:4,13, 17,24 29:4 34:2,4,5,7 36:9 37:24 38:2,7,8,12, 15,19,23 39:11,16 40:1,6 41:8 42:21 43:12 44:3,16,17 52:6, 8 56:18 60:19,21 64:20 79:12,19 81:24 86:22 87:3,7,16 90:24 91:2,6, 14,18,19 92:14,18,21 93:2,5,9 94:24 95:15, 24 96:3,6 97:17,24 98:20 99:3,14,19,24 100:14,15,24 101:1,6, 24 102:5,13,16 103:24 104:3,6,12 105:2 106:13,20,23 107:3 108:3,9,13 109:19 110:18 122:6 135:16 136:7,10 146:19,23 147:19 148:24 149:3,5, 11,18 150:20 151:15 152:3,18,23 153:11,17 160:15 204:3,6,20 205:2,14,23 206:12,23 207:12 208:8 209:22 210:1 212:17,20 215:2, 7,14,17,21,23 216:2,18 217:15 230:4 231:6,15

delivered 110:18

236:9,11,16

delusion 41:20 42:7 43:19

delusional 41:8,16,18 42:10 43:3 217:2

demand 20:11 77:6

demands 77:4

demise 230:9

demographics 179:16

demonstrate 192:24

demonstrated 81:14 176:11 191:4

Denise 8:12

department 34:18 50:21 55:10 68:12 74:21 80:4 83:11,12 103:8 122:13 125:12 129:5 130:21 155:20, 23 159:21 182:9 214:11 234:7 236:1

departments 10:7,17, 18 56:9 70:11 91:5,8 110:13 224:18

depending 49:14 59:7 72:23 77:10 90:7 91:22 110:9 169:4 187:5 225:2

depends 68:15 113:1 162:5 203:22

deponent 8:14 9:4

deposed 24:1

deposition 102:2,17, 21 130:23 146:16,17 184:10,12,23 224:3 225:9 239:13

depositions 10:4 170:2 224:10

depressed 74:15

depression 74:6,11, 20 111:20,24 112:5,6 114:22 133:5

dermatologists 12:1

describe 40:5 42:20 102:20

descriptions 39:24

design 214:9

designate 15:1

designed 128:23 192:21 195:16 214:7

desire 25:4 155:12

detail 33:17,24 112:10

detailed 43:7

details 47:3 75:8 117:7,19 173:18

180:16,17 189:16 206:2 207:20 210:12

detect 85:17,19 88:19 89:23

detected 165:24

deterioration 198:8

determination 62:6 107:11

determine 13:21 30:1 34:6 61:24 88:21 103:9 106:22 138:9 186:11 197:24 204:11 207:20

determined 239:3

determines 56:18

determining 44:2 53:7 62:2 135:16 136:24

develop 74:5,11 108:10

developed 112:8

developing 112:22

development 220:4

device 194:17 195:15

devices 194:19

devil 43:1

Dharmavaram 178:6 179:3

diabetic 76:12

diagnosed 151:15

diagnosis 14:21 15:19 16:1 53:19,21 54:21,24 55:1,3,8 87:16 97:10 98:21 107:3 135:23 215:11

diametrically 20:1

diaphoresis 109:8

diastolic 72:16 199:23 201:15

die 87:4,8,11 99:3 148:4 150:8 153:2 155:23 160:2 204:3 227:2 228:17 236:16, 18

died 11:11 12:19 14:2 46:24 63:18 148:6,9 150:6 155:21 160:1 206:18 207:5,18,21 208:1 210:10 212:8 215:5 217:13 231:7,11, 12,20 236:10,12 237:10,15,21

Diego 8:8 9:14 86:17 155:10,15,20 157:1,15 158:15,18,24 159:7,21 169:2 184:18 222:21 225:20 226:2

dies 14:11 97:24

difference 34:19 119:2 191:12 202:5 231:24 232:4

differences 159:17 179:16,18 191:13,14 232:6

differentiate 33:3

difficult 32:8 34:19 35:19 42:18 43:8 87:13 104:18 194:19 236:5

difficulties 238:23

difficulty 133:1

Dimaio 13:10 16:2,8 35:15 65:17 102:16

Dimaio's 34:1

diminution 154:21

dioxide 159:19

direct 17:4,10 86:23 122:15 128:17

direction 211:4

directions 97:14

directly 152:11 168:6

director 225:19,22 226:7 227:24

disability 227:13

disagree 25:2 35:6,10, 13,14 37:8 39:13 65:11 119:11 120:10,12 121:11,13 123:2 131:5, 15 132:2,15 139:6 163:12 169:9 174:4

177:15,17,18,20,22 179:6,10,13,22 180:13, 19 181:2 187:20,23 200:5 219:11,12,13,24

disagreed 169:11

disc 156:7

disclose 159:5

disclosed 9:16,21 159:8.9

disease 34:8 197:11 200:11 201:6

diseases 96:5,7

disorder 75:24 76:9

disorders 92:1,7 135:21 175:14

disprove 134:18

disproves 133:13

disregard 54:12,14, 18,20 55:10

disregarded 55:13

disrupt 49:16

disrupting 130:20

dissect 140:20

dissenting 97:19

distance 21:10

distress 81:20 85:18, 20 127:5 131:6 132:5

District 8:10,11

divided 171:17

doctor 9:10,13 10:3 17:9 19:16 23:11 28:11 39:14 46:2 47:23 54:1 56:19,22 61:17 66:12 69:12 74:4 75:5 77:2 80:22 82:12 86:14 88:1 90:23 98:18 102:11 105:12 106:3 111:13, 15 116:22 117:15 125:9 130:23 136:4 146:24 148:20 150:18 154:14 156:21 165:19 170:10 175:17 178:5 180:10 185:1 189:7,10 197:20 199:17 203:10 205:18,21 209:7 211:1, 7 214:6 227:12,17 228:2,15 232:10,20 233:10,23 236:2 239:10

doctor's 98:10

doctors 113:18,22 151:19

document 47:19 73:24 75:1 87:21 98:14 102:20 116:18 117:11 124:24 125:5 143:10 148:16 150:14 151:4 154:10 170:6 178:1 180:6 184:1 188:20 193:10 197:16 199:13 205:7 209:1 218:14 227:8 233:19

documentation

101:10 109:6

documented 54:18 67:2 76:21 78:10 101:20 102:19 109:1 113:15 130:14 142:24 143:20

documenting 134:23

door 131:3

dopamine 108:5,7

double 137:11 142:11 208:11 209:13

doubt 53:21 80:7

dragging 42:14

dramatic 202:13

dressing 120:4

driver's 31:12

drop 72:16

drug 14:12 18:16 25:21 26:24 34:21 37:13,17, 19,20 39:18 59:5 64:19 68:7 92:23 128:9 149:21 153:23 216:1 229:19

drugs 14:3 15:10 19:1 20:21 25:5 26:3,21 32:23 34:8 39:6,11 42:6 92:1,12,19 122:4

135:21 153:24 158:12 160:19 161:12 185:19 213:21 232:5

drunk 128:9

due 11:13 16:12 26:24 34:7 37:5 59:2 63:15 68:7 128:16 198:8 210:8,22 237:5,14

duly 9:6

duplicate 163:1

duration 163:21 168:10

dying 26:1 103:17,18, 19 236:23

dysrhythmia 12:24 67:11,17,21,23 71:1

dysrhythmic 67:9,12, 13,17

dyssynchrony 199:24 201:16

Ε

e-mail 239:6

earlier 25:24 37:18 86:6,12 131:17 142:2 146:21 174:5,13 221:3 230:7

earliest 27:6

early 26:22 27:2 40:2 88:10

East 10:8

easy 105:24

ECG 52:16,18,20 54:5, 7 234:17

echo 116:11

Echocardiographic 178:10

ED 237:20

Edgcombe 169:21,24 172:4 173:5,22 174:1, 12,21 177:20

Edgcombe's 175:5

Edgeco 169:23

editors 94:12,13,16 162:15

education 81:13

Edwards 8:17 9:9,10 47:12,17,18,22 48:7,9 69:3,11 73:22 74:3 75:4 87:19,24 90:17, 19,22 98:17 100:10,12 102:10 105:9,11 111:4, 12,14 115:24 116:8,21 117:9,14 120:9 124:21 125:3,8 141:16 142:18 148:14,19 150:12,17 151:2,7 153:5,8 154:9, 13 156:8,11,20 170:4,9 177:23 178:4 180:4,9 183:23 184:7,16,21,24 188:18 189:9 193:8,13 197:4,8,19 199:9,12,16 205:5,20 208:24 209:4 218:12,21 222:6 227:11 228:4 232:9 233:9,11,13,17,22 239:10

effect 32:23 143:7 154:16 157:10 173:7 178:7 193:3 203:9 223:24 226:3

effects 115:1 157:12 168:16 197:9

effort 124:5,7,8,10 190:21

Eighteen 189:1 215:15

Eisenmenger's 77:19

EKG 52:18 54:9 138:14

EI 224:1

elderly 82:20 198:17

electrical 13:4 182:3 188:4

electronic 235:13

elevated 95:9 101:12 104:1 109:1 112:1

eleven 204:4 **else's** 149:24

emergencies 91:12

emergency 8:24 34:8, 18 50:21 55:10 56:6,8 59:13,14,15,18,20,21 60:4,8,12,22 61:1,2 68:12 70:11 74:21 75:10 80:4 83:11,12 91:5,8 103:8,15 110:20 122:12 124:14 127:2 129:2,4 130:20 139:17 143:23 148:3 182:9 205:16 216:13 234:7 235:24

emergently 61:3,4,5

Emotional 92:24

employed 169:16

employees 145:14 146:3,5,13

EMS 51:12 60:2 72:9 77:15 110:19 138:22 141:1 143:5,19 144:2, 16,21,23,24 145:5 165:11 187:19 218:19, 23 219:1 222:18,23 223:9,11,13 225:20,22, 24 226:3,12

EMS's 165:3

EMT 50:17 66:10,11

EMTS 27:7,11,13,22 28:12 57:10,13

encountered 206:12

end 26:1 155:2 191:14

endangered 119:21

endocrinologists 12:2

12.2

ends 45:3 218:6

enforcement 57:10 82:24 138:24 145:7,8, 21 146:12 165:7 238:14

enhance 151:21

enlargement 95:6

enrolled 158:7

entire 15:4 49:13 67:17 77:12 211:19

entities 110:6

entitled 87:15 93:12 117:4 178:7 188:16 197:9 204:24

entity 110:5 153:22

environment 43:24 44:6,11 227:12

environmental 228:10

epidemiologic 213:23 217:22 232:6

epidural 172:11

episodes 91:1

equal 185:10,14 214:2

equipment 134:5 194:17 195:22 234:20 235:14

ERS 128:10

ESI 124:15 126:5,11,17 128:2 129:1 131:14 132:2

essential 52:4,10

Essentially 157:3

et al 8:13 165:21 178:6 199:21 208:21 231:5

etiologies 185:24

etiology 50:8 149:10 183:14 204:7,20 208:9 215:21 217:2

evaluate 49:7,18 55:21 58:23 113:8 157:23 212:3 214:10

evaluated 124:9 129:11,19

evaluating 171:7

evaluation 22:15 49:3 52:7 56:23 59:18 76:15 84:17 103:16,19 104:9 105:13,15,21 112:18 113:2 129:5,6,12 183:20

evaluations 213:21

event 63:22 67:12 96:9

226:17,18 227:1,4 228:5.17

events 208:20 209:18 227:13

evidence 99:12,16,17 101:19 107:21 108:24 109:3

exacerbated 96:2 174:24 175:9

exact 18:5 27:24 31:22 34:16 64:18 67:4 87:1 123:7

exam 52:12

examination 9:8 52:5 139:6 232:16 233:8

examined 9:6

examiner 13:11,13 98:3 103:2

examiners 97:22 162:16,17

exceptions 132:9

excited 11:12,13,15, 20,24 12:9,13,17,20 14:4,9,15,18,24 15:2,9, 17,19,23 16:3,8,10,12 17:13 19:20 26:4,13, 17,24 34:2,4,5,7 36:9 37:23 38:2,7,8,12,15, 23 39:10,16 40:1,6 41:8 42:21 43:12 44:3, 16,17 52:6,8 56:18 60:19,21 64:20 81:24 86:22 87:3,7,15 90:24 91:2,6,14,18,19 92:14, 18,21 93:2 94:24 95:14,24 96:3,6 97:17, 24 98:20 99:3,14,18,24 100:14,15,23 101:1,6, 24 102:5,12,15 103:23 104:3,5,12,17 105:2 106:13,19,23 107:3 108:3,9,13 109:19 110:18 122:5 135:16 136:7,10 146:18,23 147:18 148:23 149:3,5, 11,18 150:20 151:15 152:3,18,22 153:10,17 160:15 204:3,6,19 205:2,14,23 206:11,22

207:12 208:8 209:22 210:1 212:17,20 215:2, 6,14,17,20,23 216:2,18 217:15 230:4 231:6,15 236:9,11,16

excluded 46:11,12 48:1,13 96:16 158:8 160:7

exclusion 58:19

exclusionary 99:17

exclusively 206:16

excuse 63:13 175:17

exercise 168:13

exhalation 190:16

exhaustion 65:14

exhibit 8:1 47:13,14,20 74:1 75:2 87:22 98:15 111:13 116:1,2,3,4,5, 19 117:12 124:23 125:1,6 148:17 150:15 151:5 154:11 170:7 178:2 180:7 184:2 188:21,24 193:11 197:5,6,14,15,17 199:14 205:8,11,12 209:2 218:15,20 227:9 233:20

exhibiting 52:13 94:23 217:23

exhibits 184:5,12 233:18

exist 97:18

exonerate 169:17

expect 12:1 38:14 43:11 126:8

expectation 133:8

experience 132:16 151:13 236:7

experienced 70:3

experiencing 41:19

experiment 163:12

experiments 163:13

expert 9:16,20,21 17:20 109:14 128:23

150:22 158:22 169:16 232:20

expertise 46:20 103:6 141:19 151:13

experts 199:6

explain 94:7 166:7 213:15,19

extension 25:7

extent 120:8 121:24 122:2

extrapolate 217:17

extreme 42:10,21 43:11 122:1

extremely 50:8 59:4 68:20

extremity 128:12

eye 133:4

eyes 24:16 193:21

F

fabricated 98:20

face 24:15

face-to-face 84:16

facilities 40:12

facility 227:14 228:14

fact 47:24 57:13 62:20 64:7 89:10 133:12,13, 16,21,22,24 134:3,6, 13,14,18 153:18 162:23 166:13 177:8 191:1 213:15 215:14

factor 95:17 96:14 102:14 191:2,18

factors 96:4 135:20 204:24 205:12

facts 61:21,23

factually 194:21

fading 40:9

failure 95:9

fair 12:22 15:21 38:17 48:20 71:24 93:6

120:11 168:21 204:22 209:20

fairly 52:3 196:2

fairness 224:20

faith 214:16

fall 107:18 226:23

falling 31:5 44:23

falls 145:1 183:18,19 226:22

familiar 19:22 36:19 74:18,23 75:6,8 83:9 93:17,19 111:16 117:3, 6,18 122:22 141:5 169:21 178:5 180:10 188:15 193:2,6 208:22 210:9 219:1,3 224:2 234:4 238:12

family 120:18

fan 219:21 220:11

fashion 211:17

fast 60:6

FDA 69:23 70:8 73:23

feasible 28:22,23 29:6 30:8 44:19,20 49:7 54:8 63:20 79:9 104:10 105:17 139:7 140:7

feature 96:12

features 107:5 175:14 209:22 210:1 212:20 213:9

federal 33:15 48:13,15 83:12,17 238:8

feel 43:18 67:22

feels 161:10

feet 21:1,7,8,11 219:17

felt 41:23 102:13

fence 82:12

FEV1 190:22 191:23 192:9

fever 185:20

field 11:16,19 52:23 103:6 142:10 160:14,

18 169:8 188:7 196:5

fight 19:12 116:24 117:1 123:21

fighting 19:14 20:21

Figure 126:17 181:9 190:11

file 8:9

finally 231:4

find 14:2,10,23 99:20 153:20 155:1 166:3 179:22 195:6 200:12

finding 54:12 107:6 171:9 174:7 179:14 198:13.14

findings 14:17 198:22 215:12 232:21

fine 30:22 80:19 231:18

finger 51:20 195:22

fingers 45:1

finish 176:15

Fisher's 162:8

five-minute 111:2

flat 90:9 189:23

flawed 196:14

flaws 196:6

flexed 190:3

flexion 25:7

flight 116:24 117:1 123:21

flip 25:3,13

flipping 25:15

floor 163:9 189:24

floors 163:16

flow 95:21 124:14

fluid 31:16 170:22 179:17

focus 130:10

follow 58:3 79:1 84:5

foot 31:9 222:15

footnotes 147:2

force 152:13,14,20 190:15 208:20 209:17

forced 190:9 193:17 194:1,5,13 196:22

foreign 226:21

forensic 11:2 13:15,20 14:1,8 16:9,21 38:24 39:24 101:14 103:14, 15 106:12 153:11 162:13 169:8 197:12 204:8 209:6

Forget 129:1

form 112:5 119:23 141:14 142:17 206:13 208:4 222:5

forthrightly 230:8

fortunately 34:15

found 108:13 112:7 149:21 154:20 198:21 209:21 218:11

freak 43:6

freely 20:17

frequency 91:6

frequently 36:13,14

front 34:16 49:8 189:24 225:13 227:17

full 31:16 172:13

function 154:24 157:13,24 159:18 173:17 178:9 181:2,7, 12,14 194:9,10 199:24 200:17 201:15

functional 45:19

functionality 172:23

functioning 12:15 29:22 32:9 172:18

funded 155:13 157:1, 20,21

funding 155:14 159:6

funds 83:13,17

FVC 190:12,22 193:24

G

G-A-L-L 39:24

gain 31:17

Gall's 39:23

Garrett 8:19

Gary 8:14 9:5,12 94:3 204:19

gas 136:8 186:14,16

gases 191:16

Gass 8:22 48:3 116:4, 6,10 184:4,11,19 188:23 189:7 197:6,13 205:10,18 227:16 228:2

gather 125:23

gave 12:23 13:2 35:7 58:21 164:7 190:20 234:1

gears 203:10

general 45:3 77:14 87:13 110:10 173:16 174:10 182:17

generalized 119:14 121:2 149:15

generally 155:6 226:9

giant 103:15

girlfriend 89:20

give 11:6 18:22 31:5 34:16 36:20 53:4 64:18 65:9,22 76:15 77:21 80:22 81:10 84:8 87:19 103:3 109:14 112:11 114:9 132:19 133:12 134:22 136:14 138:12 166:2 186:8 187:7,11 188:23 199:9 205:10 221:8 225:3,7 227:16

giving 46:9 59:8,9 65:18 80:6.19 105:7

glad 76:4

glitch 174:1

glucose 50:2,3,5,11, 19,22 51:9,16,19 52:12,15 139:4 140:4 142:9

go-to 10:13

goals 60:1

gold 135:15,17 136:5, 16,23 137:1

good 8:5 30:5 44:22 49:20 54:13,20 63:4 66:21 69:1 111:3 132:17 138:8 176:24 177:13

Goode 8:12,18,20 11:7,11 12:19 19:5 20:10,23 24:6,12 27:21 28:12 31:8 35:1,24 40:23 48:23 49:23 50:11 52:13 54:9 58:1, 24 59:13 60:22 63:24 64:15 65:22 69:18 73:6 75:19 76:17 80:11 84:23 86:11 89:8 95:10,12,22 101:7 107:7 108:11 109:2 113:13 114:13 115:14 124:5 127:10 128:1 129:2 137:3,10 141:2, 11 160:8 161:1 163:24 167:3 172:24 176:11 181:24 183:3 190:6 207:8,15 216:18 217:8 220:23 228:17,24 233:1 234:3

Goode's 21:11,15,18 23:5 27:14 56:12 62:11 67:8 72:8 78:8 168:6 207:13 230:1,9

government 33:15,18 110:7 236:15

governmental 110:5

governs 83:17

grabbing 44:24

Graham 53:20 54:3,4 57:24

graph 190:11

Grateful 36:23

great 169:7,10,12 180:11 211:5 218:4 236:8

greater 113:4 118:20 185:11,13 187:13,14 191:5 231:16

greatest 190:9

ground 45:18 163:9

group 100:22 162:20, 23 200:7,21 201:7,20 210:16 231:17

groups 20:16 25:8 200:7,9 202:10

guards 79:18

guess 22:4 40:17 63:19 88:7 91:9 99:6 129:13 143:3 237:9

guessing 133:21

guideline 128:6 219:22

guidelines 93:12,23 97:7 106:4 218:20 219:2 235:22,23

guides 125:21

gun 44:8

gurney 24:13 64:4 82:22 163:7

gurneys 25:3,10,13 163:14

guy 10:13 105:19 129:8 150:5,9 159:22

guys 195:24

Н

Haldol 70:1,3,7,20,24 71:5 114:14

half 41:6 62:21 74:5,7, 10 112:7,12,13,21 128:8 164:2 167:5 168:7

hall 23:18 24:6 130:18 131:1,3 208:21

hallucinate 19:11

hallucinogen 216:9

hallucinogenic 120:18 121:21

Haloperidol 69:14,18, 24 70:4,20 71:9

hand 110:23 111:13 145:3

handcuffed 148:12

handcuffs 42:23,24 145:11,17 146:3,6

hands 20:24 21:6,7,11 30:10 190:23 207:1 219:17

Hanover 109:15

happen 70:10 91:8 213:23 215:15 226:21

happened 23:4 48:18 207:24 237:10

happening 42:15 43:21 238:4

happy 33:9 63:16 79:20

harbinger 103:23 104:11

hard 42:8,14 86:21 145:9 173:19

harder 138:13

harm 221:7,11,12

harmful 198:1,16

Harvard 36:18

hat 49:23

haves 232:13

head 25:15 41:14 42:6, 18 45:10,17,23 49:1,5, 11,14 74:23 84:7,9 121:8 211:6 222:14 237:22 239:5,9

health 117:21 145:22 146:1

healthy 176:10

hear 41:11

heard 14:6 24:9,10 33:14 43:17 98:2 131:2

hearing 24:4,7 89:14 130:19

heart 12:15,17,23 13:2 22:1,6 28:20 55:17 60:11 64:10 68:10 72:2,5,8 73:17 121:14 128:11 134:2,3,10,15 171:17 172:1,3,18,22, 23 173:1 174:4 177:4, 12 178:18 185:10,13 188:5 189:6 200:10,14, 19,21 201:5,6,17 202:2 203:3,5

heat 92:5 108:2,17

heavily 12:14

height 80:18

held 46:19 221:23

helped 214:9

helpful 57:9 202:20

hemodynamic 127:3 178:8,14,15,16 179:4,8

hemodynamics 179:17

hemorrhage 14:20

Henderson 148:23

HERETO 8:3 47:21 74:2 75:3 87:23 98:16 116:20 117:13 125:2,7 148:18 150:16 151:6 154:12 170:8 178:3 180:8 184:3 188:22 193:12 197:18 199:15 205:9 209:3 218:16 227:10 233:21

heroin 38:5

hey 43:3

heyday 36:12 37:4,10,

Hick 122:23 124:22

Hick's 123:2

high 15:12 50:8

higher 123:12,17

187:1,2

highlighted 153:22

highly 42:22 216:3

hired 46:23 109:22 110:1.2

histories 202:12

history 49:21 56:24 57:5,6,9 59:7 96:12,17, 22 99:22 200:10 201:5

hobble 83:1 193:16 205:24 206:13,24 208:3,4 223:22 231:6

hobbled 212:10,22 219:16 220:13 232:8

hogtie 19:18 21:6 39:10 41:1 45:24 83:1 99:10 100:3 116:23 155:24 157:17 159:23 164:1 206:4,22 207:1 213:13,16 215:5,7 220:18

hogtied 10:14 20:5,23 21:11 24:24 25:3,10,16 40:23 49:10 62:12 118:13 141:2,5 148:1, 11,13 150:9 155:21 158:16 159:12 161:7, 15 165:4,12,13 167:8 168:7 189:19 191:23 206:15 211:2,8,16 212:9,10,23 215:9,15 220:14 232:2,8

hogtying 24:24 39:4 154:14 172:17 211:20 212:24 213:2 214:19 224:18

hold 47:13 90:20

holding 42:13,14 43:1

home 151:20

homicide 102:24

honest 119:3 204:10

honesty 166:12

hook 31:4

hospital 45:14 50:21 51:12 54:12 55:10,13,

19,24 56:15 59:22 60:13 61:3 62:14 63:2, 19 64:2,9 66:9,12,17 67:4 72:10 73:12,14 78:9,22 81:7,11,18 82:8,20 83:16 84:1,15, 20,22 90:13 104:5 110:19,21 115:21 124:6,13 144:3,18 145:1,9,14,23 146:2,5, 9,13 148:3 163:14 182:8 188:8,10 221:6 225:1 228:7 236:9 237:6,7,8 238:5,15,22 239:2

hospitalization 207:23

hospitals 33:21 83:3, 17 110:8 144:21

hour 41:6 62:21 66:13 84:16 164:1 167:5 168:7

hour-to-hour 85:2

hours 203:15

human 216:24

hundred 31:24

hundreds 123:5

hurt 25:14

Huskison 9:1 141:14 142:16,17 222:4 232:17,18 233:6

hyper 100:9,10

hypercarbia 191:17

hyperkalemic 15:14

hyperthermia 100:9, 13,24 101:5,15,19 103:22 104:11,14 108:19,21,22 109:13 210:14,23

hyperthermic 101:7, 18 108:24 109:5 210:11,14

hypertrophy 95:7

hypo 100:11

hypoglycemia 75:24

76:10 92:3

hypotension 172:12

hypotheticals 46:7

hypoxemia 75:24 76:10

hypoxemic 186:9,12, 17,20 187:4

hypoxia 67:6,7 74:20 76:13,18,22,24 112:9, 14,17,19,22 113:3,11, 17,20,22 114:1 136:22, 24 187:19 191:17

hypoxic 130:10 137:22 138:9 187:15

I

ICU 195:17 235:19

ID 35:24

idea 78:19 132:17 138:8 161:10 171:7 176:24 177:13 203:17

ideally 76:11 104:8 138:22

ideas 138:11

identifiable 15:8

identification 204:7, 20 208:9

identified 106:17

identify 8:15 13:23 14:21 15:6 185:16 187:24

identifying 106:13 183:20

ignore 30:2 78:1

illicit 59:5

immediately 89:8 103:18 125:14 133:9 138:20 235:20

immensely 88:12

impact 62:12,22 63:6, 7,23 159:19 167:22 173:17 189:2 191:10

198:18.20

impacted 64:12 172:22

impactful 180:21

impacts 201:12

impairment 113:24

impede 71:10

implemented 181:23 182:4,10 183:10

implications 197:1

implicit 140:18 181:5

implied 130:12

implies 195:1 207:1

import 72:15

important 61:20 114:20,24

imposed 180:24

impossible 30:11 53:23 116:12

inaccurate 134:3

inappropriate 58:6

incapable 24:17

inches 21:13 24:13,14

inciting 52:9

include 96:22 98:22 139:3 140:3 144:9 162:20

included 49:5 94:17 98:19,24

includes 98:19

including 81:18 84:12 160:19 172:10

incoherently 147:24

incompetence 107:19

inconsistent 29:22 30:13.16

incorrect 54:22 133:24 134:11 199:4

increase 88:11 96:5 121:14 194:21 230:16

increased 96:1 104:2 163:10 175:2 176:3,16, 19 200:15

increases 108:6

index 80:18 124:14 125:9 126:5 128:2,3 129:1 132:3 171:10,16 173:10 174:8 200:15, 17,20

indexes 126:1 202:3

indication 130:3

indications 113:7

indicative 15:23 108:12

indicators 87:12

indisputable 133:22

individual 43:10 144:19 151:12 210:10 211:15 216:14 220:20 221:13

individuals 34:10 35:10 110:8 151:19 161:4 164:17 168:17 169:20 191:15 198:1, 21 204:2 205:1,13 206:9,18 209:13,21,24 234:6

induce 76:23

induced 34:21 64:19 152:22

induces 199:22 201:14

infarction 200:11

inferior 171:23 174:22 177:13

infiltration 172:11

influence 14:3,12 25:5 39:5 68:13 147:13 158:12 229:12,17,22 230:5

information 23:14 28:5,13 75:13 125:23 143:18 176:7 216:10

ingestion 39:17

inhalation 190:16

inherent 195:13 196:3

initial 34:6 139:2

initiated 138:21,24 155:11

inject 70:14

injection 35:23 114:21 116:15

injuries 148:10

injury 105:20 150:8

insert 115:4 116:8

inserted 69:20

inserts 116:16

insignificant 154:17, 22 202:16

instance 19:6 42:23 56:20 144:23

intake 159:13,16

integrity 84:14

intellectual 166:12

intended 163:1 220:16

intent 94:20 128:18 223:6

interesting 93:20 128:3

intergroup 179:16

intermittently 64:16

international 164:14

interplay 172:17

interpret 41:12 43:23 65:12,20 126:3 166:17 192:15 194:20

interpretation 24:3 128:17

interpreted 55:2 68:7

interpreting 44:6,11

interrupt 175:17

interrupted 57:8

interrupting 133:18

intervals 226:14

intervened 131:21

intervention 26:22 27:2,7 125:14 126:13, 22 127:1 128:2,13,20 129:3,7,12,14 131:8 132:7,15

interventions 127:3 131:13 145:23

intoxicated 128:9 161:4

intoxication 27:1 68:17 160:19

intramuscular 35:23

intramuscularly 34:12 35:12,16

intravenous 139:4 142:7

intravenously 35:17

intrinsic 34:7

introduces 108:21

introduction 40:10

intubated 127:4 131:21

intubation 131:12

invariably 100:13 101:1

investigating 93:12, 23 97:8 106:4

investigation 162:9

involve 152:4 230:3

involved 12:14,17 27:11 51:18 71:13 93:13,24 97:8 106:5 109:17 112:17 118:5 188:2 205:22 215:20 228:19,21,24

involvement 97:4

involving 118:7

irregular 22:2,7 67:18 86:1 202:5

ischemic 200:10 201:5

Island 88:5,7

issue 34:24 35:4 77:17 96:11 119:19 162:3 174:11 183:11 191:8,9 220:6

issued 69:23

issues 92:9,13 132:24 194:14 195:13 196:3

IV 35:19 36:4,6 54:4 62:3 69:20,24 70:3 116:15 138:14

IVC 171:22 172:5,8 174:22 175:7

J

Janet 24:1

Jason 204:19

Jim 8:19

jingling 43:17

joint 76:13

journal 75:10,14 117:20 139:17 143:22 166:11 205:16 209:6

judge 46:18 47:14,24 48:13,15

judgment 132:11 144:15 185:22

July 227:21

jumped 147:12,15,21 150:5

jumping 19:5 37:16 105:19 148:10

jurisdiction 165:8

jury 26:3 44:1 51:18 70:19 155:13 157:8 166:7 211:1

jury's 45:5

Κ

keeping 20:12

Kelli 8:12

Kevin 8:17

key 179:8,20 180:2

kicking 63:3

kidney 95:8

kill 17:7 18:3 71:1 159:21

killed 147:22 215:3

killing 19:7

kills 37:21

kind 33:24

kinds 43:22 68:16

knees 21:7

Knock 237:4

knowingly 96:21

knowledge 46:14 81:14 121:5 122:12 154:7 169:18 202:16 230:17

L

LA 100:18,21 205:21 207:6,16 208:6 209:14 214:15,19 222:20 231:5

lab 107:9 108:15

lack 15:11 97:16

lactic 20:19

language 87:1 119:17 132:10 238:17

large 20:12 25:7 196:7

larger 212:13 214:20

Larry 146:22

late 40:1

law 57:10 82:23 138:24 145:7,21 146:11 165:7 238:14

lawsuit 155:17,19

lawsuits 110:9

lay 13:3

laying 181:3

laypeople 116:24

layperson 13:6 159:20

lead 19:3,15 52:22,24 53:3,6,11,12,13,14,16, 23 54:8 62:5 176:19 189:3 205:14

leading 61:21 175:1,15

176:2

leads 53:4 188:3

leap 191:19

Leary 36:15,17

leave 221:15 230:14

Lee 224:1 236:14

left 64:3 91:5 156:7 167:8 201:18

leg 190:4 211:16

legal 162:8 209:6 230:20,22

legs 190:3 207:3

length 167:6

letter 227:23

letters 238:22,24

level 18:22 43:7,20 104:13 110:22 128:10 134:20 145:3 191:20 195:10 197:2 207:4 235:19

levels 15:13 33:2 44:9 50:6 159:19 187:5 195:13

Lewman 146:22

license 31:12

life 23:2,5 63:4 86:7

life- 128:1

life-saving 127:1 128:13,20

lifesaving 125:14 126:13,22

lights 60:3,6,9,12,14 61:5,8

likes 179:2

limb 189:2

limitation 160:17 166:15,19 190:20

limitations 166:11 168:22

limited 84:12 235:16

list 17:5,23 18:10 84:6, 8 105:2 116:1,2 117:10 127:8 152:12 170:5 197:5 226:19,23 227:5 238:12

listed 17:1 26:8 52:11, 12 186:10 193:22 209:9 225:13

listen 74:8 85:5

lists 17:11 238:10

literally 70:23

literature 26:5,10,11 38:20 40:3 53:7 97:12 98:19 120:23,24 152:9 177:1,11

litigation 46:13 156:2,

live 77:22 131:22

LLC 8:24

local 172:11 192:22

locate 87:20

location 8:7 166:2

lock 190:4

long 10:22 16:15 41:2 47:2,8 55:23 81:22 163:18 164:3 168:1 175:6 176:16 203:14

longer 141:11 165:23 167:9 168:2 204:12,16 223:16

longest 163:21 167:2

looked 15:24 18:7 22:9 33:23 101:15 111:17 128:4 166:14 192:4 235:21.23

loose 207:2

loosely 206:14

lorazepam 116:15

Los 206:10 212:6

loss 172:10

lost 76:2

lot 10:15 15:9 25:6,7 45:1 49:17 61:11 81:22 103:19 195:13 202:18

lots 60:7 131:19 187:9

loud 24:5,11

love 34:15

low 50:7 76:13 77:2,3 100:2,4 112:9 186:20, 22 187:2,8

lower 68:9 72:5 100:7

lowers 203:4

Loyola 178:6

LSD 11:14 12:20 17:1, 6,7,12,15,24 18:2,10, 14,22,24 19:9,10,11 25:19,23 26:8,9 35:2 36:8,11 37:1,2,4,5,10, 11,19,23,24 38:14,19, 23 40:15,20 59:2 68:13.17 102:5.14 120:15 121:1,16 122:9, 14,20 128:16 146:18 147:3,11,14,17 149:2, 4,10,17,20,23 151:9,15 152:3,6,17,22 153:14 154:1 160:10,11 161:3 216:6,11,12,14 229:5, 8,12,15,17 230:5

Lumbar 178:9

lung 181:2,7 198:15

lying 161:15

М

M-A-S-H 106:6

M.D. 9:5

Macaw 8:23 232:14

machine 51:22 195:21

made 46:22 53:19 55:1 147:18 194:19

magistrate 46:18

maintain 98:11 131:8 132:7 186:1

maintained 32:9

major 20:6 91:24 182:24

majority 26:20

make 54:23 56:21 71:2 74:16 80:15 84:21 91:3 97:14,15 105:24 107:11 115:8 143:3 156:23 172:13 176:23 186:7 203:16 219:23 230:10 231:22 238:19

makes 112:22 137:6

making 23:9,17 44:7 89:11,15 125:17 130:18 176:21

man 46:24 80:16,17 155:20

manage 79:14 171:6

mania 40:4

manner 103:3,9,21

manpower 32:5

marijuana 21:15 230:7,8,13,16,20

mark 47:12 73:23 87:20 90:17 116:1,2 148:14 150:12 151:2 153:5,7 154:9 217:3 233:17

marked 47:20 74:1 75:2 87:22 98:15 116:19 117:12 124:23 125:1,6 148:17 150:15 151:5 154:11 170:7 178:2 180:7 184:2 188:21 193:11 197:17 199:14 205:8 209:2 218:15 227:9 233:20

marker 123:11

markers 14:23 15:5,6, 16 44:15 106:16 217:6

Marty 8:21

Mash 106:6 107:24 135:24

Mash's 107:9

mass 80:18

match 107:5

matching 134:8

material 164:19 236:4

materials 142:2

math 231:2

mathematical 164:4

Matt 8:23

matter 57:13 64:11

mattresses 163:8

maximal 40:24 83:2 99:9 211:17 232:23

maximum 190:15

Mccormack 8:18

meaning 39:8 96:9 167:18

means 12:23 65:19 112:1 144:11 166:8,9 167:15 185:18 215:11

meant 128:18 137:21

measurable 159:17 173:7 191:13 202:3

measure 72:21 78:15 137:23 181:11,17 188:4 190:15 191:14 195:3,9,19 201:10 202:6 220:4

measured 72:9 73:15 172:20 176:4 196:9

measurement 136:21 138:13 139:4 142:9 164:12 171:19 192:6 196:14,16

measurements 72:19 164:8 190:18 192:22

measures 138:24 139:2 140:2,4 171:16

measuring 134:5,7 154:23 195:15 197:2

mechanism 99:23

mechanisms 108:9

media 69:9 156:12,18 218:6,10 239:14

Medicaid 33:11,21 83:6 227:20,21,22,24

medical 11:21 13:6,11, 13 17:5,23 22:22 23:1 25:19 27:9 40:2 44:16 46:4 50:9,16 52:5 59:17,19 60:22,24 61:2 72:9 75:12 76:6 85:14, 16 86:4,7,9 88:22 89:6 97:11,17,22 98:3,19 101:16 103:2 120:22 123:20 124:12 129:3 138:20 162:8,16,17 170:23 178:7 202:11, 16,20 224:21 226:6 233:4 235:5,17 239:7

medically 48:21 67:20 88:18 90:5,11 112:23 177:1

Medicare 33:22 83:6 227:20

medicate 32:13

medication 25:21 32:20 34:11 35:11 59:9 68:9,23 69:16 70:11,16 71:11 76:16 220:2

medications 34:10,17 40:14 58:22 68:21 81:10 113:6 127:2 131:11

medicine 11:17 30:5 39:24 54:13,20 72:6 75:10 103:15 139:18 143:23 151:23 153:11 170:13 177:11 197:12 204:8 205:16 209:6 216:13

medics 31:23 32:1

meds 57:2

meet 14:14 57:16 58:17,18

meeting 190:18

meets 84:20 107:1 128:22

mellow 68:18

member 81:5,8 82:8 218:22

members 152:14,20

Memorial 84:22

memory 117:16

Memphis 48:13 184:17

mental 34:7 48:22 117:21 127:6 128:7,16

mention 152:18

mentioned 53:6 92:10 130:15

mentors 157:7

Meredith 198:13

Metabolic 122:23

methamphetamine

26:6,15 122:2 149:19 152:6 153:24 216:2

method 187:16

methodology 190:14 191:9 192:3 214:9

methods 172:9 189:21

Metropolitan 236:14

Miami 107:9,15 108:15

Michael 9:12

mid 186:24

mild 181:10 187:19

million 91:1

millions 70:23

mind 99:13 203:11

mini 193:20

minute 22:15 62:9 166:19 168:2 185:11 200:22 219:6

minutes 23:5 50:24 56:3 61:11 72:17 78:11,12 129:22 130:1 156:7 163:20 164:9,10 166:14 167:3 203:20

misinterpreted 131:4

missed 130:1

missing 90:20

Mississippi 8:11 57:19,21,22 59:10 77:15 187:19

misunderstood 51:8

misused 194:16,18

moaning 24:5,10 Model 218:19 219:1

moderate 76:18

money 33:22

monitor 28:20 55:8 66:3,6,18 68:19 70:14 72:3 73:2 78:22 79:1 85:4 127:24 134:15 138:14 187:24 188:1,3, 13

monitored 31:2 66:1, 4,13,16,19 73:12 80:23 81:2 104:6 113:19 115:6,14,18 127:19,22, 23 220:3 234:8 235:9, 11,13

monitoring 52:19 70:17 79:6 81:4,9,13 82:1 84:10,24 90:14 112:15,18 134:4 139:3 140:4 142:4 186:13 188:2 234:17,19 235:14

monitors 31:5 32:8

Monte 224:1

morning 8:5

move 20:5 24:18,19,22 25:6 42:4,16,17 49:17

moved 64:6

movement 24:17 25:1 32:10 45:4,19 118:16 207:2

moving 20:16 22:13 30:9 44:21 89:16 105:19 130:9,13 171:8

174:6 203:19

muffled 225:5

multiple 30:15,17,18 73:4 135:4

municipalities 110:10

muscle 20:16 25:7

muscles 20:6,13

myocardial 200:11

Ν

names 40:4 188:24

narrow 181:22 182:13, 18 183:1,5,6,8

Nashville 19:17 20:2 236:14

national 12:6,7 218:18,19,23

necessarily 27:3 49:19 53:3 65:4,7 126:6 140:7 152:15 212:3 232:3 239:1

needed 110:16 235:10

needle 35:21

negative 201:2,9

negligent 224:22

Neuman 96:16 154:20 156:2,24 157:3,6,22 158:21,22 159:5 162:20,23 169:3

NFL 80:20

nice 184:4

Nichols 121:10,11

Ninety-three 113:12

noises 23:9,17 24:5 89:11,15 130:18

non-hogtie 220:19

non-medically 90:14

non-surgical 176:5

normal 67:18 73:19 77:3 80:15,17 112:2

186:20,22,24 187:3,8, 15 201:7 202:4,7,10 229:6

Northern 8:11

notable 194:22 196:19 202:13

notation 134:1

note 63:6 98:8 99:2,8 149:4 150:1 179:15 197:2 201:6,9 202:23

noted 13:9 22:8 40:2 50:22 88:10 105:9 109:8 154:2 165:19 168:11 173:3 179:19

notes 172:4 218:3

notice 90:6 146:16

noting 200:23 202:8

number 8:9 9:17 10:4 15:8 26:19 31:22 61:10 77:14 78:18,20 82:18 90:19 91:17,22 93:6 94:21 98:10 110:14 114:9 116:1 125:3 126:14 127:18 131:18 132:22,23 133:3 137:20 156:13,18 165:3 169:10,12 170:4 173:14 177:23 180:5 183:24 185:6,15 188:18 189:4 190:1 193:8 196:13 197:8 199:9,12 203:5 205:5, 11 208:24 210:15 218:6,10,13 221:3 228:1 239:14

numbers 30:12,15,17 31:6 72:22 187:12 192:12 193:1 194:24 201:22,24 214:17 217:16,19,21,22 231:21

nurse 54:3 56:17,21 57:3 133:23

nurses 56:11 80:2 124:17 125:11

nursing 86:2 117:21 128:5,24 235:19

0

O'HALLORAN 38:22, 24 39:3,9 146:22 147:2,6,8,12,18 150:4 152:10,12,16,19

O'Halloran's 150:2

O2 76:13,19,21 77:13, 19 78:8,10,13 79:1,6 100:7 113:3 127:20 130:13 131:17,20 132:5,13 133:9,10 134:6,11,15,16,19 137:1 155:2 186:13,16, 19,20 187:13 191:15 195:8.10

object 51:21 102:7 105:5 119:23 141:14 142:17 222:5

objection 132:20

objective 130:12 137:23

objectively 157:23

objects 226:22

obscenities 147:23

observation 71:20 84:3 130:8,15 234:2,8 235:4

observe 49:18 86:11 88:20 89:6 112:24

observed 89:1

obstruction 172:5,8 174:22 175:7

obstructive 197:11

obtain 88:22 104:15, 18,22 135:1

obtainable 134:21

obtained 32:6 98:11 104:10 137:17

obvious 14:19 99:22

Occam's 214:22,24 215:10

occasion 238:1

occur 39:6,11 138:22 139:23 168:14,17 179:4

occurred 163:3 164:16 236:3

occurs 102:23 233:10

odd 119:17 220:7

offer 46:20,21

officer 22:8,19,22 23:3,6,15,20 44:9 85:11,12 86:5,16 89:7, 17,19 93:12,24 97:8 106:5 130:16,17 239:7

officer's 22:20 146:12

officers 28:3 31:19 41:4 64:17 86:12 141:3,10 145:16

official 55:1

Officials 218:19,24

older 176:8

Oliver 8:22 9:20 70:6 137:13

one's 100:7

one-on-one 234:2,24 235:4,16,19

one-to-one 234:7

open 115:8

operating 21:3 175:11 176:20

operational 238:23

operations 227:21,23

opine 21:17 36:10 103:1 230:17

opining 103:5

opinion 11:6,11 12:19 14:24 61:22 62:13,22 63:6,7 109:4,19 129:2 135:16 172:18 175:4 179:12 196:1,4 216:19 219:18 230:8,10,18 233:3 234:1 235:3,15

opinions 46:3,20 48:14 98:23 103:3

110:16 198:23

opportunity 27:6

opposed 20:1

opposes 164:15

opposing 184:14

optimal 104:16

option 186:10 234:14

oral 101:11 109:10

Orange 165:10 222:18, 19

order 47:14,23 48:10, 19 56:1,16 124:7 138:16 140:19

ordered 51:15 55:21 70:6 137:3,8,9,12,14, 17

ordering 131:11

orders 137:11

organ 179:1

organization 12:6,8 33:12

organs 95:21 178:20, 22

original 130:14 233:24

outcome 64:12 103:23 104:12

output 172:21 175:2, 16 176:3,4 194:18 196:8,17,20

overdose 19:1

overly 83:4

Overruled 105:10

overview 126:1

ox 30:11,18 62:4 127:24

oximeters 45:6

oximetry 29:4,7,15,16 30:1 32:6 44:18 45:22 48:23 113:19,21 114:2 115:11,17,20,22 138:8 139:5 140:3 142:13,20 143:12 188:1 234:17

235:8

oxygen 19:18 20:6,9, 11 77:5,9,17,21 78:23 100:2,4 112:9 114:3,6 129:15,18,22,24 130:4 132:8,18 133:7 136:12, 15 137:15,19 139:5 140:3 143:24 159:14, 16,19 178:20,24 179:2 186:9,18 187:20 197:2

oxygenated 114:6 oxygenation 118:20 119:1 131:9

Ρ

p.m. 218:6,10 239:14package 115:4 116:8, 16

pages 116:17 228:3

paid 203:15

pain 60:10 216:22

panel 17:20 150:22 151:13

paper 17:13,16,21 87:17 88:1 93:15 100:21 101:4 105:16 112:10 113:8 117:16 140:9,14 150:3,19,23 151:9 152:2,11,12 153:20 159:8 166:10, 18 170:10 173:12,23 174:14 179:22 180:1 194:14 206:8

papers 152:13 187:4

paragraph 174:8

paralytics 33:4

paramedic 36:1 48:24 53:20 54:4,16,19 55:6 57:23 139:9 142:6 221:3

paramedic's 58:7

paramedics 50:20 54:11,23 57:13,18 58:8,11,13,21 64:9 109:8 165:6 206:3

parameters 192:24 193:6

paranoid 43:6

paraphrasing 82:2 106:15

Park 109:16

Parkes 188:15 190:7 191:21 192:17

parking 61:11

part 21:15 34:14 43:2 46:13 49:3,9 52:4,7,12 64:13 72:6 74:17 86:8 89:14 91:16 112:18 124:10 131:23 146:6 150:23 151:12 166:12 169:4,5 209:16 214:12 216:12,14 226:1,15 230:5.9

partial 136:14 137:18

participants 96:17

participate 229:5,9

participated 17:19 154:20 155:7 208:14 212:12 214:7,8 217:5 224:21

participating 208:16

participation 229:1

parties 144:21 159:3

parts 34:13 35:7 81:23 118:17

party 159:2

pass 237:3

passed 24:13

past 94:9 110:14 123:1 225:14 239:7

patency 115:5

patent 186:7

pathologist 11:2 13:16 14:1 16:9,21 39:1 101:14 107:15

pathologists 13:20 14:8 162:13 pathology 103:2,14 169:8

pathophysiology 123:13

patient 27:9 28:15,19 29:3 32:18 48:22 49:2, 6 55:21 56:18,23 57:7, 11 59:1,16 60:8,21 61:11 70:14,18,21 76:5,8 77:1 78:6,7 79:11,14,18 80:3,23 81:1,15 84:3,11 104:5 106:1 110:18,19 113:2, 5,18 114:3 119:10,21 123:21 126:12,21,24 128:14 131:5,10 132:4 135:2,18 139:22 140:23 145:6,19 146:6, 10,11,14 147:12,21 153:2 170:14,16 171:8 173:6 177:3 182:8 186:1 191:5 219:7,15 220:15,21 221:12 222:19,23,24 223:4,16, 18 227:2 228:5,6 234:23 237:15 238:1

patient's 119:9,20

patients 11:24 30:9
32:15 38:10 40:5,12,18
58:22 59:21 71:20
72:20 74:5,10,13,21
79:6,23 82:1 87:3,7
101:5 103:16,17
106:18 120:2 122:13
123:12,14 124:18
131:19 145:24 151:14,
20 157:13 166:14
173:14 174:9,15 176:5,
8,10 177:9 191:21
200:14,19 201:2,23
202:11 212:22 213:8
217:23 220:1 236:16

pattern 65:8

patterns 71:24

Payne-james 204:19

PCP 26:6 149:19 152:6

PDFS 184:20

PEA 67:11

pediatrics 45:12

peer 74:9 75:14,17 166:10 177:2,8

people 12:15 17:8 18:3 25:2,9,13,14,24 27:6 31:17 32:7 37:15 39:5, 7 40:14 41:7,15 43:5, 21,22 44:7 45:2 56:11 60:17 68:12 69:16 71:19 80:1 82:19 90:10,14 97:13,19 99:2 100:23 112:8,13,21,24 114:19 130:10 151:14 158:2,8,11 163:16 164:7,21 169:15 174:19 175:11 177:14 187:3 196:5 198:15,17 201:5 203:16 205:22 206:22 207:5,11,16,18 210:4,18,22 211:2 212:8 213:17 215:3 217:12 229:19 230:1, 15 231:6 232:4 235:18 236:9.11

pepper 97:2,5

perceived 104:5 139:22

percent 26:17 31:24
76:21 77:2,13,16 78:1,
10 113:4,11,12,14
127:10,16 131:7,20
132:6,13,18 133:11,13,
22 134:19,23 186:16
187:14 190:13 191:22
192:9,15 193:16,20,22
194:3,13,20 195:9
196:8,17,23 204:2,4
217:11,24

percentage 190:12 217:10

Perceptions 117:4

perfect 140:8

perform 13:22,23 144:17

performed 11:9 137:9 169:15

perfused 178:23

peril 223:10,12,14

period 39:19 40:7,17, 20 62:1 66:7 164:10,12 165:23 167:2,9,19 168:1,2,12 184:23 226:8

periods 164:7 166:22 167:1

permission 56:19

person 14:2,11 22:3 26:23 31:2 42:21 43:11 44:3,14,17 52:5,13 59:4 68:9 86:10 88:19 90:6 94:23 105:2 106:22 108:3 114:8 116:22 130:18 154:15 157:4 160:14 161:14 171:3 181:18 186:11 221:10 229:4 231:11, 12 234:11 235:5,17 237:18

person's 171:17

personally 236:18 238:3

personnel 50:21 51:13 72:10 110:21 145:9,15

persons 103:23 104:12 217:5

perspective 131:19 136:2 172:16 191:12 220:21

Pham 47:14 48:1

pharmacologist 18:19

phase 104:19

phencyclidine 154:1

Phillips 8:21 48:5 102:3,7 105:5 232:12

phone 89:20 218:17 232:12

phrase 132:4

physical 65:13 81:19 84:10 85:7,9 94:22 99:12 138:19 139:6 140:21 197:10,24 216:22 217:1 232:7

physician 50:6 55:20 56:6 83:24 110:20 131:10

physicians 8:24 151:17

physiologic 95:19 108:10 139:13 171:5 189:2 191:13 201:12 207:14

physiological 154:15 168:13

physiologically 72:18 154:18 155:2 164:22 165:1 180:21 195:2

physiology 22:2 109:6 166:1 167:10,15 173:8 229:14

pick 78:13 195:12

picking 134:15,16

picture 15:4,15 77:12

pictures 80:10,12 189:23

piece 49:20 82:2 221:19 234:19

pieces 195:14

pitfall 76:7

place 35:19 36:4 45:22 69:1 188:13

places 10:11 57:17 58:21 140:15 154:15

placing 36:6 119:20 157:16 159:12 174:3 177:3,14 188:3 201:2

plaintiff 10:23 156:3 225:2,3,8

plaintiff's 225:17

plaintiffs 10:21

plan 135:11 230:10

planning 171:7 203:12

play 62:9 230:9

played 21:15

player 80:20

point 13:18 17:22 18:9 22:5,12 27:16 29:1 37:8,10 50:3 51:5 62:16 72:3,16 73:16 74:16 75:7 78:21 80:9, 10 85:11 104:8 110:24 111:17 118:3 120:24 122:9 127:21 130:4 134:22 141:23,24 170:11 179:20 188:11, 12 211:4 214:4 220:24 226:5,9 239:7

pointed 213:9

pointes 71:1

points 72:23 169:2 179:8 180:2 219:10

poking 51:20 62:3

pole 80:7

police 10:7,17,18 14:4, 11,16 22:19,20,22 23:6 27:18 28:3,11 39:7,11 41:3 46:24 47:1 62:20 64:6,14,17 85:11,12 86:4,12,16 97:23 98:21 109:22 110:2,4,7,13 130:16,17 139:8 155:20,22 160:15 161:8 163:9,17 164:15, 17 169:17 205:22 206:3 207:17 208:14, 20 210:19 211:20,24 212:4,13 213:16 214:11 216:23 224:18

policies 211:23

policy 84:15 119:12 120:14 222:18,23

population 81:15 82:20 113:5 128:9 191:17 202:7,10 206:17 210:3,5,7 212:14,21 213:7,11 214:5,21 217:17 231:7,

populations 213:22 231:21

Portapres 194:17 195:14

portion 49:14 183:20

portions 106:17 183:18

poseys 82:21

posing 105:8

position 14:4,7 20:11, 19 21:3,6 24:19,22 31:2 39:4 41:1,2 56:12 83:2 99:9 100:6 118:5, 7,15,20,24 119:10 154:14 155:24 157:10, 24 159:12,23 160:4 161:7,9 163:2,5,9,22 164:10,11,18,21 165:4, 12,14,20,23 168:8 169:15,22 170:14,16, 23 171:3,9 172:6,17,22 173:7,15,23 174:2,3,6 175:12 176:19,22 177:4,12,14 179:5,18 181:6,10 189:2,18,19, 23 190:4,5,6,8,12 191:23 195:20 196:15 197:24 198:7,12,16,18 200:3,18 201:3 202:17 203:1,4,9 211:17 219:17 220:14,19 221:11,15 223:1,10,12, 14,20,21,22 237:11,15

positional 81:20 82:7, 10,13,19 83:20 157:10 165:20

positioning 49:15 174:24 175:9 177:5 178:8 179:9 193:3 199:22 200:16 201:14 207:10 232:23 237:6,7,

positions 82:22 117:5 118:4,12,19 120:3 155:1 157:14 160:23 174:16 180:24 181:12 189:13 190:21,23 191:2,4 195:17 201:11 209:19

positions' 189:14

positive 63:5

possibility 176:9

Post 182:6

postmortem 31:12 50:13 87:12 105:14

potassium 15:13 95:9

potent 216:3

potential 55:2 76:7 96:11 108:9 161:16 220:3 232:5

potentially 196:19 221:7

pounds 31:10 79:11 97:3 222:15

practicality 138:15 144:14

practice 84:19 190:17 204:8 235:24

practices 212:1,4

pre-existing 95:22

pre-hospital 29:17 100:19 129:10

preceded 64:21 65:2, 10

precedence 139:2

precipitant 215:23

precipitated 12:20

precluded 78:24

predefined 129:10

predictability 87:10

predispose 95:2

predisposing 94:22 95:2,4,14,17 96:4,14 135:20

preferred 102:18

pregnant 91:13,14

PREMARKED 8:1

premortem 87:12

prepare 124:11

prepared 138:23

preparing 131:12

presence 15:10 98:11

216:23

present 8:15 16:1 32:5 97:24 138:23 182:11 183:3,6 191:4

presentation 14:17 15:4,10 34:6 68:15 97:10 136:3 139:13 207:14 215:17

presentations 40:1

presented 158:20 195:1

presenting 40:5 52:8

presents 44:14 48:22 182:8

pressed 118:21

pressure 60:11 64:10 72:13 73:4,11,18,19 118:8 119:9,16,20 120:5,7 136:14 137:19 172:21 175:19 178:17 181:1,4 188:1 195:11 196:10,20

pressures 72:21 73:8,

prevalent 37:2 149:21

prevent 27:4

prevented 220:22 221:1 222:8

Prevention 34:3

previous 226:6

previously 204:1

Price 155:10,16,19 159:22 221:23 222:7, 16

Price's 221:21 222:12

primary 145:18 146:17 149:6,7,8 154:4,7

prior 22:10 50:15,20 51:9,10,15 66:18 67:4 89:8 99:4 137:4,10 164:24

prisoner 146:12 158:17

probe 105:18

probes 195:11

problem 76:6 171:21 172:5,8

problems 60:18 113:24 172:24 220:18

procedure 52:1 222:19 237:20

procedures 175:23

proceed 69:10 111:11 218:11

PROCEEDINGS 69:7 111:9 156:16 218:8

process 62:19 74:17 103:17 123:24 236:19, 23

produce 87:15

professional 151:22 179:12

professionals 169:8

proffered 11:5

prohibit 165:4,5,7

prohibits 165:11

prompt 88:11

prompted 102:3

promulgate 33:20

promulgated 227:1

prone 39:4 40:24 62:12 83:2 99:9 100:3 118:5, 7,15,24 119:9,15 120:2 154:15 157:16 159:12, 23 161:7.15 164:1.15 165:4,13 167:9 168:7 169:15,22 170:19 171:9 172:6,17,22 173:7,15,22 174:3,6,23 175:8 176:22 177:3,5, 12,14 178:7 179:5,9,18 180:24 189:2,24 190:1 195:20 197:23 198:7, 16,18 199:22 200:3,16, 18 201:2,14,24 203:1 208:16 209:18 210:13 219:16 220:14 221:15. 16 232:23 237:5,7,10, 14,15

prone-restraint 117:5

proned 195:18

prong 51:21

pronounced 51:6

pronunciation 120:16

proper 59:2 229:20

properties 114:19 120:19,21 121:13,15, 19,22 122:11 154:24

prophamine 108:1

proposition 122:19 147:3 174:11 187:8

protective 20:10

protein 106:11 107:21 108:2,12,17,18

proteins 108:2

protocol 58:3,4 59:11, 22 60:14 119:8,11,17, 18 120:6 125:19 126:11 181:19 182:15, 20,23 183:10,15,19 223:6 226:11

protocols 57:16,20,22 58:2,17,23 59:8 84:5 119:5 165:16 181:21, 23 182:4,10,12 223:8 225:24 226:2

provided 184:5

providers 165:11

provision 146:10

psychiatric 38:9 40:12,18 91:12,24 92:9,13 117:21 135:21

psychiatrically 34:21

psychological 81:20 84:11 168:16

psychomotor 74:22

psychotropic 92:12

publication 91:12,16 94:6,10 208:8

publications 74:9 106:24 164:21

publicly 39:3,9

publish 149:16 166:10 168:5

published 25:24 75:9 117:20 150:20,23 155:7 162:11 168:3 204:17 209:5

publishers 94:8

pull 125:3 165:18 177:23 180:4 183:23 193:9 197:4 218:12 225:11 227:6

pulled 21:1 45:3 147:7

pulmonary 154:24 157:13,24 159:18 181:12,14 182:3 194:9, 10 197:11 198:1

pulse 29:4,7,15,16,24 30:11,18 32:6 44:18 45:6,22 48:23 62:4 66:17 113:19,20 114:2 115:11,16,19,20,22 127:24 134:7 138:7 139:4 140:3 142:12,20 143:12 185:2 189:5 234:17 235:8

pulseless 127:4 182:3

pumping 171:17

pumps 172:1

puncher 80:21

pure 19:1

purpose 72:6 114:2,17 198:4

purposes 144:14 161:19 230:21,23

push 151:22 192:11 203:18

pushing 175:11 203:17

put 14:3 16:15 29:1 38:4 41:4 44:13,23 45:2 62:5 63:24 64:14 68:13 70:16 82:24 95:23 101:23 102:15 104:20 131:18 133:9 140:10 142:20 143:6 161:7 163:16 166:11 170:18 172:15 189:5 213:5 214:16 220:24 221:2,10,16 223:14 226:7,10,11,19 227:17

putting 30:17,20 51:22 119:8,16 159:22 164:21 165:12 167:13 176:22

Q

QRS 90:9

qualification 140:10 168:11

qualifications 104:21

qualified 58:10,12 86:10 105:17 140:15 160:9,11 228:24

qualify 23:13 110:11 127:12 201:19 229:6

qualifying 137:7

qualities 72:5 122:21 216:8

question 12:10,12 21:2 23:12 25:12 27:23 51:8 53:19 54:22 66:16,22 72:12 74:8 76:2 83:19,23 86:15 91:20 110:12 126:12, 21 130:14 141:15 189:10 203:11 213:5 214:21 215:1 216:16 219:13 222:5 232:19 236:3

questions 46:9,10 61:15 105:8 125:22 232:14,15

quick 69:2 203:11 232:19

quickly 32:12 55:18 59:22,24 61:7 68:22 71:16 192:4

quiet 22:14

quote 34:5 60:8 65:9 122:15 138:18,19 180:23

quoted 106:4,11 **quotes** 18:10

quoting 40:8 65:17 236:13

R

R-O-E-G-G-L-A 193:3

rail 80:13

raise 121:14

range 21:13 41:6 77:3 80:15 133:14 187:1 204:5 231:3

rapid 131:11 216:24

rarely 113:18

rate 28:20 55:17 60:11 64:10 68:10 71:17 72:2,5,8 73:17 121:14, 15 134:2,4,10,15 172:22 178:18 185:10, 13 200:15,19,21 202:2 203:3,5 216:17

razor 214:22,24 215:10

re-evaluated 234:9

re-review 180:16

reached 118:1

reactions 92:24

read 16:14 34:3 79:3 112:10 123:5 138:18 139:21 140:14 142:1,2, 15 162:7 173:12 176:18 185:12 211:3 219:6 221:21,24 222:7, 10

reading 29:16 30:1,6, 11 53:5 77:16 78:1,7 90:2 113:13,15 115:19, 22 132:18 133:10,22 134:19 135:1 137:2 142:22,23 143:1,2,4,6, 7,13 171:11 186:16,19 206:11 211:11

reads 30:18 195:21

ready 71:3

real 132:23 138:8 192:16,18 194:21

reality 13:4 43:20 64:7 138:12,13 164:23 227:5

realize 42:4,22

reask 91:4

reason 30:13 35:15 101:23 165:9 211:19 220:12

reasonable 36:7 44:19 46:3 68:24 82:3,6 115:10 146:15 220:8 223:19 227:4 233:3

reasons 87:2,5,6 120:3 144:13

reassess 72:4

reassessed 234:9

reassessing 81:9 82:1

reassessment 85:3 129:20

recall 35:8 64:16 65:23 73:20 79:20 101:3 109:21 111:18 135:6 141:4 142:10 153:16 211:5 222:1,2,10 224:4 234:3 237:23 238:4

recalling 211:11 239:9

receive 44:18 77:16 142:3

received 71:21 75:19 220:1 238:21,22,24 239:2

receiving 76:20 83:17 112:13,21

recent 94:10 231:2

recheck 73:3

recognition 88:10

recognize 12:2,8 15:16,22 41:17 42:15, 16,24 43:1,5 81:19 85:23 90:10 113:22,23

recognized 32:15 55:13,15 113:18 172:6,

9 174:23 175:8

recognizes 43:5

recommend 32:14 164:20

recommendation 219:22

record 8:16 29:15,17, 19,21,23 54:19 55:4,5 66:9,10,11 69:4,9 79:4 111:6,11 134:1 156:13, 18 218:5,10 239:13

recorded 54:13,16 134:10 192:6,18 194:8

records 50:16,17 101:16

recovery 223:20,21

recreate 161:6

recreational 229:19

recruited 198:5

rectal 105:18

rectum 105:23

red 24:15 95:20 114:5

Redefining 87:16

reduce 172:10

reduced 19:18

reduction 173:9 191:22 193:17 194:13

reevaluated 135:12

reevaluating 85:2

refer 25:18 26:6 96:1 122:15 169:12 178:16 228:21 236:8

reference 9:22 121:6 147:2,11,17 149:23 151:1,8,11 152:2 153:13 154:2 173:13, 14 204:11 225:7

referenced 48:4 151:11 152:11,12 208:7,10

references 106:9 147:9 149:10 162:18 187:9 205:4 referencing 174:14 176:7

referred 146:21 155:6 198:24 199:2,6

referring 23:22 62:15 63:17 82:23 115:3,4 125:10 127:16 140:22 146:7 150:2 162:5 166:13 173:13 175:22 176:20 178:17 187:5 201:4 204:15 208:18 224:12 229:3 235:5.24

refined 231:17

reflect 33:8

reflected 24:10

refresh 117:16 143:9

refreshing 189:15

regard 202:22

registered 138:7

regular 103:7 120:3

regulated 84:1 108:6

regulations 33:20 238:8

regulatory 226:20 238:18 239:3

related 47:6 93:24 228:6

relative 91:9

relax 114:19

reliable 17:5,11,23 18:9 25:18 29:21 30:2, 21 75:12,16,17 94:14, 15 106:12 109:11 162:12,14 177:11

relied 100:21 168:23, 24 169:1 204:23 217:11

relook 143:14

rely 106:22 168:24 169:6 212:7 228:16

remained 165:22

remains 97:11

remember 27:16,18, 24 31:21 36:23 47:3 101:21 110:1,2 117:19 123:6 137:8 155:22 198:10 211:10 226:19 233:1,24

remote 234:16

removed 63:2

render 61:22

repeat 64:23 76:3

repeated 127:20

repeatedly 79:5 136:5

repertoire 169:5

rephrase 209:20

replacement 132:11

replicate 30:7 160:14 161:18.20

replicated 160:24

report 16:12 24:18 30:14 88:2,9 101:17 102:1 109:14 142:19 143:6,19 149:9,14 150:19 151:16 152:15, 24 153:1 201:22 202:16 214:18 221:22 225:11 232:20 233:15 235:15 238:1

reported 23:10 24:21 35:2 37:23 38:8 63:13, 14 70:5 85:24 86:2 89:17,21 102:2 109:10 149:20 211:6 214:18 217:21 238:5,9,11,16, 19

reportedly 116:15

reporter 9:3 47:16 90:18,21 116:5 153:7 197:15 199:11

reporting 22:20 37:5 149:24 190:22 202:8 203:6

reports 38:22 40:9,13 79:17 106:24 149:16 174:5 221:4

represented 25:10

28:4 200:8

represents 97:10 223:16

reproduce 93:7 160:18 161:12 163:4 168:15 192:11 194:15

reproduced 192:16

reproducibility 190:19 192:8,13

reproducing 192:23

request 56:21 57:3 149:2

requested 12:5 134:13 146:16

require 58:14,16 89:5 127:1 128:1 129:2,6, 12,21,24 131:10 234:7,

required 59:9 83:15 84:17 105:22 128:19 129:4,13,15,17,19 130:4 205:24

requirement 79:7,9 85:8 234:2,10 238:7

requirements 59:8 84:2,4,15,20

requires 112:14 126:12,22 140:17

requiring 187:20 205:1,14

rereading 147:15

research 10:15 18:1, 14,15 106:15 160:22 164:24 166:10 196:5 216:15 229:23

researched 37:7 121:9

reserve 98:9

resident 9:13

residents 157:5

resist 19:12

resistance 19:13

resisting 20:13 161:11

resistive 221:10

resource 149:7

respiration 71:14 112:2 115:6,15 154:21 193:5

respirations 22:4 71:22 74:15 193:4

respiratory 71:17 74:5,11,20 84:13 85:18,19 96:5,7 111:20,24 112:5 113:24 114:22 127:5 131:6 132:5,24 133:5 166:1 167:10,15

respond 81:19

responding 216:22

response 74:6,11 108:18,20 123:20 208:5

responses 146:18

responsibility 110:20, 23 225:23

responsible 146:9

responsive 89:3 133:19 149:2

responsiveness 174:20

rest 164:7,10,12

restrain 33:3 83:2 145:24 148:2 221:13

restrained 25:14 27:16,19 28:1,2,8,10, 17,18 64:8 81:24 84:2, 12 99:4,6 116:23 141:9 164:1,2,18 191:23 206:2,11,13,22 207:7 208:3 219:16 220:5,14, 24 222:24 231:6

restraining 190:1

restraint 10:8 19:18 32:24 33:4 41:1 57:24 59:3 62:19 69:14,17 80:23 81:2 83:20 97:2 99:9 100:3 102:23 111:21 112:8,14,15 117:1 145:18,23 146:23 157:10,14 161:2 163:2,8,21 164:16 165:20,23 168:7 180:24 188:16 189:3 190:3 191:1,3,4 193:16 197:10,23,24 205:2,14,24 206:4,14, 24 207:7 208:4,17,20 211:18 220:2 222:19, 24 230:2 232:7,23

Restraint- 122:23

restraints 14:3,11,16 32:18 33:8 39:10 57:14 58:15 69:14 71:21 74:6,12 75:23 76:20 81:17 82:21 112:20,22 114:13 123:9,16 145:7, 8,10,21 148:13 160:23 198:8 207:18 208:14, 19 211:16 213:11 221:1 227:2,14 228:6, 13 238:2.9,15

restricted 181:2.7

result 30:7 112:20 137:14 203:1

resulting 12:21 200:16

results 29:19 118:1,18 158:14 179:15,20 191:11 193:24 213:1 215:24

resuscitate 138:23

resuscitated 22:5 103:18

Retain 226:21

retained 10:18

retracted 109:18

returns 172:2

review 38:20 58:6 61:16 63:16 75:17 79:21 101:4 109:24 148:24 169:6 180:17 226:14,16

reviewed 18:4 47:9 74:9 75:7,14 123:1 143:8 152:13 164:19 166:10 177:2,8 226:8,9 228:22 reviewing 75:18 202:23

revs 108:8

Rhode 88:4,6,7

rhythm 54:16 55:2 66:5,7,14 67:18,19 89:24 90:2,6,8,14,16 142:5 188:1

Ric 8:22

Rich 46:15 47:6 48:2

Richard 29:11 141:24 189:3

Rick 184:9

rights 110:12

risk 95:24 96:2,5 104:2 105:20 114:21 123:12, 18 141:8 191:2,5,18 198:7 221:11 230:16

risks 60:5

road 229:7

Roeggla 193:2,14

role 33:23 226:1

roll 25:3

rolling 31:3 129:9 223:23

Ronald 38:21,24 146:22

room 23:7,12,17,23 34:8 85:13 87:10 89:22 110:20 124:9 131:1,10 148:3 234:11,22 235:18

Ross 94:3

rotate 226:13

rotating 226:6

roughly 31:9

rule 76:24 99:13,15,18, 24 184:11 225:11

ruling 100:8

S

S-H-I-M-I-Z-U 199:1

S-T-E-T-T-E-R 109:15

S-Y-M-P-A-T-H-O-M-I-M-E-T-C 121:17

safe 105:18 124:3 145:22 146:11 223:15

safeguarding 20:9

safely 59:24 61:7 104:18

safer 19:1

safest 219:19

safety 144:14 219:7 220:15,16,20 223:4

salts 26:7

Sam 217:16

sample 51:22

Samuel 205:15

San 8:8 9:13 13:12 16:2 86:16 155:10,15, 20 157:1,15 158:15,18, 24 159:7,21 169:2 184:18 222:21 225:19 226:2

sat 76:21 77:13,20 78:10,13 79:1 113:3 127:20 130:13 131:17 132:5,13 133:10 134:6, 15,16 135:1,7 137:2 186:13,19,21 195:8,10,

sats 76:13 131:20 155:2 187:13 191:15

saturation 78:8,23 79:6 100:2,4,7 132:18 134:11 137:15,19 197:3

Savannah 46:16 47:7, 15 48:2

saving 128:2

scales 128:22,24

scenario 78:5 132:22

scene 27:13 28:4 29:11,13 31:19,23 32:1 39:15 40:16 64:15 141:1 220:19

science 149:15 153:11

scientifically 192:14 202:20 214:2

score 126:10

scores 124:15

screaming 130:11 133:2 147:23

screening 149:22

seated 181:10

seats 163:8

secluded 81:24

seclusion 81:18

secondarily 16:13

secondary 19:8 38:14,

seconds 113:4

section 34:4,5 193:23 211:13 219:10 228:10

sections 160:18 187:16

secure 28:4 141:11,18

security 79:18 145:16 146:5

sedate 56:11,13 58:1 69:16 124:5 236:20 237:1

sedated 74:21 105:21 129:19 236:10,17,19 237:18

sedates 71:15

sedating 32:20 68:21 71:11 72:4 76:5

sedation 55:17,18 57:18 59:5 68:8,22 74:17 114:19 123:24 124:11 129:14 135:8,9, 10 183:12,16 221:9 236:7 sedations 69:13

sedative 236:24

semantics 32:21,22

seminar 98:4

send 184:19

senior 157:3

sense 42:12 74:16 84:21 91:3 112:23 137:6 143:3 231:23

sensing 43:18

sentence 65:12,18,20, 21 144:7,9 166:8 172:13 175:7

SEP 232:14

separate 233:18

sepsis 185:20

September 48:5

sequence 131:12

sequential 185:7

Sergeant 221:21,23 222:7,12,16

series 100:20 149:20 208:3

serve 106:12

Services 33:12 83:7 227:20

set 84:5 85:1 220:9

setting 59:6 123:10 129:10 138:17 195:18

seventy 31:12

severe 60:10 127:5 131:6 132:5

severity 124:14 125:13 132:2

shackles 145:12

shaken 45:24

share 78:18

sharp 51:21

Sheriff's 155:23 159:21

shifting 69:12

Shimizu 198:24 199:8

Shimuzu 199:21 201:13

shock 108:2,17 185:21

shoot 44:7

shootings 93:13,24 97:8 106:5

short 167:19

shorter 166:22,24

shortly 11:1 55:20

show 50:19 54:17 73:15 90:3 93:21 133:4 187:17 196:7 202:9

showed 109:13 118:19 213:10

showing 63:3 146:18 149:2 190:12 201:22

shown 74:4,7,10 96:7 172:21 176:5 180:23

shows 202:19

sickle 95:15,20

side 164:21 220:24 221:6,23 222:2,8 223:1,23 229:7

sides 118:6 221:3

sign 29:20

signature 106:12 107:21 108:12

significance 194:12 200:24 202:9 203:8

significant 155:3,4 159:14 165:24 167:10, 14,17,18,19,20 196:11, 12,13,18,23 198:17,20 199:23 200:9 201:8,14 202:1,7,24 203:6

significantly 71:12

signs 57:1 63:3,4,5 81:19 84:14 85:1 106:19 113:23 124:10 139:3 144:9 212:17 217:23 **similar** 34:22 92:17,22 93:4 153:16 176:10 189:19 207:9 231:22

similarly 207:7

simple 52:1,3

simply 23:13 56:19

single 53:11 54:7 190:15 192:6 215:11 221:19

sinus 67:18,19 68:1,6 183:9,13,17

sir 24:20 99:16 100:5 111:21 126:16 156:9 185:6 193:18 230:6

sirens 60:6,9,13,14 61:5,8

sit 61:10 122:18

sites 215:3

sitting 184:17 234:10

situation 140:8 168:6

situations 26:18 93:1 160:19

size 31:7 171:18

skills 103:19

skin 84:13

skinny 80:16

sky 15:12

slow 55:17

slowly 205:11

small 66:6 155:1 159:17 180:19 181:16

smaller 212:21 231:17

SMDL 228:1

society 181:15 190:18 192:22,23

soft 148:12

solely 22:18

SOPS 77:15

sort 15:3 19:8 42:6 43:2 72:20 108:7

121:2,5,19 122:12 125:19,24 126:9 187:1, 2 190:2 191:12 192:3 200:8 211:11 220:7

sound 105:24 222:16

sounds 19:22 33:18 43:18 93:18 117:6 139:19 141:5 206:1 208:22 210:9 218:4 224:2 227:3 234:4

source 14:19 75:12 145:18 154:5

Southaven 8:12 9:2 232:19

Southeastern 8:23

speak 58:10

special 84:14

specialized 107:13 108:15

specialties 11:21,23

specific 15:6,8 18:15 53:3 54:7 62:8 71:1 77:14 81:15 87:9 89:6 101:3 107:24 119:17

specifically 10:1 13:14 16:12 18:1 42:19 77:12 85:15 97:1 101:15 110:1 120:6 143:14 198:15 211:10 222:1 224:4 228:8

specifications 181:15

specifics 23:3 111:18 135:6 143:10 222:11

spinal 172:11

Spine 178:9

spinning 31:3

spitting 147:24 221:5 222:3

Spitz 161:23,24 162:1, 8,19 164:13

SPO2 127:5,10,14,17

spray 97:2

staff 81:5,8,13 82:8 130:19 145:24 190:1

stamp 226:10,15

standard 104:4 131:23 135:15,17 136:5,17,23 137:1 190:17

standardized 86:22, 24

standing 189:22 195:20

start 40:13 57:2 70:17 123:24 140:21 185:22 187:18

started 40:9 55:16 156:21 157:6 186:18

starting 68:8 74:16

stasis 175:3 176:16

state 9:11 19:20 28:20 32:7,16 41:8,16 42:11, 20 44:17 45:2 59:17 64:20 93:7 97:9 104:3, 17 205:23 207:12,13 215:14 218:18,23 227:21,23 230:1,4,20 236:9

stated 39:3,9 40:22

statement 35:10 81:22 98:5 120:20 123:8 142:1,21 146:15 168:21 170:21 171:3 175:18,21,22 177:22 213:6 236:21

statements 102:7

states 8:10 10:14 46:18 91:2 177:3 224:17 230:24

stating 164:16

statistically 167:17 203:6 217:12

stature 151:22

status 27:14,24 32:9 48:22 84:13 85:20 86:1 88:23,24 89:2,4,9,13, 24 90:3 127:6 128:7,16 131:9 132:8 235:12

statuses 170:22

stay 41:2 221:5 231:10

stemi 129:9

step 125:16,18,21 185:6,9,15

Stetter 109:15

stick 105:18

sticking 35:20

stiff 174:17

stiffness 176:8

stimulant 92:1 120:17, 18,21 121:1,15,19,21 122:11,13,20,21 152:5 153:23 216:3,4

stimulants 39:21,22 121:12

stimulate 168:13

stimulating 216:8

stimuli 49:17

stomach 83:1 157:17 181:3 220:23 221:24 237:20

stop 89:3

stopped 12:24 85:22

story 147:13

straight 118:6

strain 59:19

straining 193:21

strange 195:7

strangely 94:6

straps 62:24 64:5

Stratton 100:17,24 204:24 205:15 207:17 208:7 209:14 212:6 213:9 214:15 231:5

Stratton's 206:7,10 207:6 215:8 217:10,16 231:19 232:1

stray 97:5

streaming 64:11

Street 8:8

streets 229:4

strength 216:24

stress 95:19 168:16

stressful 92:24

stressors 12:16 161:6, 9,10,14,16

stretcher 221:1

strike 25:17

strip 54:17 66:7 90:2,6 142:5

strips 66:5 89:24 90:15,16

stroke 92:5 128:11 129:9 200:15 202:3

strong 26:20 58:16 162:3

struggle 16:13 19:12 64:21 65:3,5,6,10 123:15 168:14

struggling 20:14,18 31:3 34:11 35:11 63:3

studied 107:2 118:5 201:21 207:17 209:14 213:22 216:11,12,14

studies 74:4,7,9 96:15, 19,21 100:5,6,18,19,22 106:3,21 123:6 149:14 154:19 155:5,6 160:4, 9,13,20 161:19 163:19 166:22,24 168:23 169:3,11,14,19 176:18 187:12 195:5 213:23 228:16,18,20,23 229:20,24 232:1

study 10:24 96:24 97:2,3 100:22 107:16, 24 111:19,23 113:3 117:3,7,19 118:1 123:4,9 136:1 149:13, 24 155:9,13,14 156:1, 4,22 157:2,4,6,8,16,21, 22 158:3,9,10,11,13,14 159:6 162:24 165:20 166:12,15,22 167:8 168:12,22 173:20 178:11,12 180:11,16, 18,23 191:22 192:20 193:3,7 194:22 195:14,

23 196:6 198:24 200:14 201:13,20 202:19 204:23 205:21 206:10,12 207:6 208:7, 14,17 209:5,12,16,21 211:2,24 212:3,6,12 213:3,10,14 214:1,5,6, 12,15 215:9 217:4 229:5 231:5,19

studying 210:16

stuff 25:15 43:3

style 68:15 219:12

subdued 79:18

subject 20:9 59:2 69:12 96:16 146:24

subjects 40:5 158:2,4, 7 165:22 194:16 197:10,22 198:5,6 212:17 229:20 230:3

subsequently 148:6,9

successful 139:11

sudden 15:12 19:15 21:19,20,22,23,24 22:2 27:3 153:11 188:16 191:3,18 205:1,13 208:2 230:16 232:24

suddenly 138:22 139:23 196:21

suffering 204:2

sufficient 15:1

suggestions 98:20

Suite 8:8

sum 228:15

supervise 58:8

supine 179:4,9,18 189:24 195:20 200:3, 18 201:24 203:4 223:1

supplemental 77:5,9, 16,21 129:15,18,22,24 130:4 132:20 139:5 140:3 143:23 186:8 187:20 233:15 234:1

supplementing

187:18

support 23:2 86:7 122:19 134:6 160:4

supported 117:4 118:15,20 165:1

supporting 118:7

supports 153:19

suppose 29:18 46:3 184:13

supraventricular

53:1,7 181:20 182:9

surely 206:24

surface 118:22 163:10

surgeons 33:5

surgery 119:14 178:9, 10

surgical 175:14,19,23

surprise 126:7

surprised 118:18,23 119:1 120:6

surprisingly 90:24 91:6,9

surrounded 141:2

surrounding 132:22

surroundings 41:9, 11,12 43:24

survivability 88:12

suspicion 76:12

SVO2 131:6

SVT 53:7,9,10,19,22 54:13,16,17 55:1,2,3,4, 7 182:11,12

swear 9:4

sweating 217:1

swimming 42:7

switch 156:8 203:10 220:18 221:8

switching 200:2,17

sworn 9:6

sympathomimetic

120:16 121:16,18,23 122:10 123:10 **symptoms** 14:13 40:6 52:13 92:16,17,20 106:19 113:23 198:9

syndrome 11:12,14,15
14:15,18 15:20 16:3
17:14 34:2 40:9 44:17
77:19 95:15 97:11
106:13 116:24 117:2
122:5 123:21 136:10
149:11 150:20 204:7,
20 208:8 215:2,7,15
230:4 231:15

system 15:10 108:7,8 229:8 232:5

Systems 178:8

systolic 199:23 201:15

Т

Table 227:12

tach 183:9,13

tachyarrhythmia

182:16,17,21,24 183:1, 12 185:12,19

tachycardia 53:2,8 55:12 67:16,19 68:2,6 181:20 182:10,14 183:8,17 185:2,19 189:5

tachycardias 181:22

tachycardic 55:15 67:10

takes 162:3

Takeuchi 148:23 149:17

taking 30:19 61:12 79:23 174:1 179:7 214:3 217:10 220:9 223:22

talk 26:2 48:17 163:18 165:2 187:13 201:11

talked 25:23 37:18 48:23 51:17 69:13 131:17 135:20 152:10 159:9 173:1 174:5 187:12

talking 37:12,14,15,16 60:17,18 65:13 77:12, 13 80:9 89:10,11,15 102:6 110:4,5 138:11 145:11 147:23 156:21 157:9 161:3 162:19 174:8 186:6 201:1 209:17 212:16 224:9, 10,14 229:4,7,14,15 236:7,22

talks 17:13

TARP 206:14,15

task 140:19 152:13,14, 20

technically 35:22

technique 206:15

Telemetry 234:19

telephonically 9:2

telling 44:1 202:11

tells 52:24 132:10

temperature 101:11, 21 102:18 104:2,6,9, 13,16 106:2 109:2,9, 10,12

ten 23:5 204:4

tend 84:19 108:14 113:22 182:23 195:12 219:24 230:14

Tennessee 46:16

term 11:12 13:3 33:10 38:2,11,12 91:10 122:5

terming 136:17

terms 13:7

test 51:15 107:13 137:14 168:1,5 194:9

tested 167:24 180:24 189:13

testified 9:7 10:6,20, 22 19:17 68:11 94:21 136:4,5 204:1 223:24 224:5,24 225:4,8 230:12

testify 10:16 46:15 47:5 61:18 110:12,14,

16 224:1

testimonies 79:16

testimony 8:2 13:10 22:17,18 24:3 25:9 46:8,11,13 47:20 48:1 74:1 75:2 79:21 87:22 89:10 98:15 102:9 116:19 117:12 125:1,6 148:17 150:15 151:5 154:11 170:7 178:2 180:7 184:2 188:21 193:11 197:17 199:14 205:8 209:2 218:15 221:21 224:3 225:17 227:9 233:20 236:13

testing 29:18,20 118:19 136:6 157:13 159:18 164:7 181:12, 14 192:23 194:11

testings 154:24

tests 164:3

Texas 13:12,13

text 17:5,11,23 18:9 25:19 97:7

textbook 18:5 105:13 162:11 204:14

Tharpe 24:1

Tharpe's 24:3

theoretical 34:9

theories 38:23

theory 83:3

therapy 55:16 124:12

thereabouts 231:7

thermometer 105:23

thing 32:12 35:6 48:24 50:1 52:16 63:20 95:13 131:23 176:16 215:4, 12,16 219:24 220:7 236:6

things 18:3 22:13 23:9 26:1 32:14 41:11 43:2 45:19 48:21 61:15 62:7 71:19 82:5 87:13 91:17,22 93:7,18 95:9 104:17 108:14 115:12

120:4 133:4 139:12 172:15 184:9 195:3 203:17 213:23 214:2 217:3 220:6,9 225:23 226:19,21,23 238:11 239:3

thinking 164:22 192:19 239:4

Thoracic 181:15 190:18 192:22

Thorazine 40:19

thought 18:24 24:6 50:14 65:5 108:8 131:2 192:18 199:3 204:14

thousands 123:5

threat 25:11 27:21 28:1,5,7,9,12,15,16,18 141:7,9,11,20,21,22 223:17

thrombotic 175:3 176:17

throwing 57:2 104:21

throws 195:21

thyroid 92:7

tidal 155:2 191:14

tiers 60:7

tighter 212:19

tightly 206:14

Tim 8:17 9:10 116:10 184:4,11 227:16

time 8:6 10:22 16:15
22:8 27:19 28:12 30:19
35:2 36:6 39:19 40:7,8,
15,17,20 41:3,4 47:2,8
51:16 62:2,14,16 63:18
64:1,18 65:24 67:4,17
69:4,8 73:9 85:3,12
111:2,3,6,10 124:8
129:18 134:4 135:5,14
138:5 153:1 156:13,17
157:1 161:1 166:23
167:1,19 169:5 188:13
194:7 195:19 217:21
218:5,9 229:22 230:2
239:14

times 10:16 38:5 45:1 62:7 73:4 135:5 146:4 164:2,20 167:3,6 220:17 221:3 224:7,8,

Timothy 36:15,17

tire 216:24

title 74:24 87:18 93:17 116:6 205:11 227:17,

titles 188:23

today 8:14 122:8,18 153:22 184:6 187:13

Today's 8:6

told 79:2 208:12

tolerance 216:21

tolerate 198:7,12

tool 106:12

top 74:23 84:7,9 121:7 211:5 222:14 237:21 239:5,9

topic 16:19 103:3 216:14

torsade 70:24

torso 190:2

total 209:17

totality 237:8

toxic 18:22 25:21 37:20

toxicity 37:11,12,16 210:8,11,23 231:12

toxicologic 120:23

toxicology 149:22

tracing 44:22 53:11 54:8

traditional 235:13

trained 71:20 81:5,6,8 82:8 86:10 88:19 90:5, 11,14 112:23 235:4,16

training 22:23 23:1,2 58:19 81:14 85:14,16 86:4,8,9,19 88:22 89:6

103:13 216:13

transferred 61:3

translates 134:11

transport 148:3 165:17 207:22 208:1 219:20 220:13

transported 99:5,7 108:6 206:3,20 219:15

transporter 108:2

Transporting 165:13

trauma 33:5 49:1,5 168:16 185:21

treat 67:22 68:8 71:3 92:12 151:20 182:12 183:11,13 185:16,21

treated 38:16 40:14,18 76:1,7

treating 183:21

treatise 93:11 162:10

treatment 40:11 58:24 68:3 88:11 105:15 128:5 129:5 183:18 185:23 204:7,21 208:9

triage 56:11,17 57:3 115:20 124:14,17 126:17 127:14,15,16, 18 128:22,24 131:14

triaging 126:9

trial 158:19 159:10 165:1 224:3 225:9

triggers 116:23

tripping 68:18

Troy 11:6 23:5 28:11 35:24 52:13 56:11 59:13 84:23 86:11 107:6 108:23,24 109:2 160:8 161:1 163:24 167:3 168:6 181:24 183:3 186:17 207:7 216:18 217:8 220:23 221:22 222:8 228:17, 24 230:1

true 19:1 36:11 75:22 90:23 97:10 139:24 177:7 182:11 183:18

230:6,24 236:17,20

tucked 109:10

turn 25:4,10 60:3 219:5 221:22 222:2 223:17

turned 22:10

turning 173:6 222:8

twelve 219:10

twenty- 147:4

Twenty-six 147:4

twisting 221:5

type 33:6 76:23 87:12 113:1 118:14 125:23 128:14 219:24 220:11

typed 116:16

types 23:9 45:6,8 72:20 79:6 82:15 177:9 185:24 203:5 213:20, 21 239:2

typical 120:14 235:24

typically 15:4 31:17 37:20 41:17 45:12 51:20 56:22 65:7 80:2 92:1 113:20 122:3 124:17 128:10,12,23 130:9 145:4 151:17 183:17 185:10,13 212:18

U

U.S. 70:12 212:24 213:16

Uh-huh 208:5

ultimately 106:2 135:23 150:6 158:15 230:2

unable 24:18 198:11

unarmed 79:18

unaware 41:24 42:2 48:12,15

UNC 121:10

uncomfortable 219:23

unconscious 22:3

underlying 75:23 76:6,9 170:23 183:11, 13 185:16

understand 13:5 20:24 21:12 23:8,21 24:20 35:9 43:9 46:2,7 108:1 116:12 157:9 196:15 225:5 226:18 229:13 236:5

understanding 31:7 40:23 156:23

undivided 235:1

undocumented 109:3

unequivocal 82:9

unfair 211:11

uniform 65:5

uniformly 11:20

United 8:10 10:13 46:18 91:2 224:17

universal 100:16 171:9 174:7

university 36:18 107:15 178:7 193:15 195:24

unknown 41:13

Unlike 211:14

unmanageable 80:8

unquote 60:8

unreasonable 126:10

unrecognized 74:20

unreliable 31:6 94:19

unresponsive 89:3

127:6

unrestrained 141:9

unsafe 138:15

unseen 26:9,11

unsupported 117:5 118:24 234:1

untrained 79:17

untreated 91:24

Upchurch 119:23,24 232:15

upper 189:2

upset 66:15

upsetting 82:17

urgently 61:4

user 125:22

users 153:23

usual 151:18

utility 31:4

utilize 125:10,11

utilized 81:3

٧

V-FIB 88:15 182:4

vague 119:13

vaguely 117:18

valid 11:21 61:22 192:7,14,24

values 157:24

variable 72:23

variations 43:22

vary 43:21 60:14

varying 64:6

vehemently 164:15

vehicle 60:4

vein 172:2,4

veins 95:8

vena 171:23 174:22 177:13

venous 175:2 176:16

ventilate 167:23

ventilation 154:23

ventilations 71:11,18 74:14

ventilatory

ventilatory 71:13 113:23 115:1 ventricular 95:7

verbal 22:12

verbalizing 23:19 130:9

verbatim 139:21

verifying 54:21

Versed 56:20 57:14,24

version 82:24 193:20

versus 8:12 46:16 47:7 48:2 61:14 65:14 106:20 109:15 138:11

155:10 219:12 224:1

236:14

vessels 174:17

victims 206:12 208:2

video 234:12

Vienna 193:15 195:24

view 118:17

Vilke 8:15 9:5,12 52:11 94:3 204:19 232:13

violated 144:2

violent 27:17 216:21

virtually 26:9,11 30:11

34:11 35:11

virtue 45:4

visual 234:22 235:16

visually 49:22 235:11

vital 29:20 57:1 63:4,5 84:14 85:1 124:10 139:3 144:9 190:9 193:17 194:1,5,13

vitals 29:18

196:22

voice 225:6

volume 170:22 200:15 202:3 205:17

volumes 159:18

W

wait 105:20

wall 118:8 181:1,5

wane 43:19

wanted 53:22 73:3 84:6 203:16 229:5,16

warning 69:24 70:1,7, 9,22 238:22

warrants 119:8

watch 68:18 70:18,21 71:2 114:24 115:1

watching 85:7,9 234:11

wax 43:19

ways 82:18

Weatherford 29:11,14 142:1,12

weighed 79:11

weight 31:15,17,18 62:11,19,23 63:10,12, 15,21,23,24 64:3,5,11, 14 80:18 97:3 190:2

Werner 162:1,2

West 10:8

Western 75:9

Wetli 153:10

Wetli's 153:13

white 17:13,16,21 150:19,23 151:8 152:2

wide 182:19 183:1,4

widely 162:16

window 19:6 66:7 147:13,16,21 148:4,5, 10 150:5,7,8 166:20

wing 190:2

wires 31:4 44:24

wise 177:4

withdrawal 92:19.23

witnesses 169:16

wobbling 221:4

women 91:13,14

wood 237:4

word 24:9 33:7 58:16 79:8 93:8 140:16 144:6 169:13

worded 101:22

words 18:5 33:7 91:11 128:14 143:7 226:10

work 23:20 24:23 74:18 83:11 87:15 94:8 103:7 110:6 122:22 175:13 176:12

worked 9:19 56:8 208:18 212:2

working 83:16,24 134:24 156:24 227:15

works 21:5

world 98:13

worth 214:3

wound 120:4

wrap 218:3

write 87:17 88:15 102:1 151:18 152:23, 24 166:9 168:18 171:14 191:7 200:1,4

writing 143:22 154:7

writings 99:11 212:7

written 16:3,5,6 26:22 27:5 28:19 29:3 32:12 79:5 82:16 121:4 132:1 139:20 152:15 166:5, 19 174:3

wrong 72:12 195:2,5, 22 210:15 215:8

wrote 17:18,22 55:5,6 95:13 97:18 98:18 100:24 101:17 102:11 139:14,18,22 140:4 141:10 151:16 152:16 179:24 204:6,9,19

Υ

year 94:9 204:9,17 years 74:19 107:2

110:15 123:6 160:5 204:12 208:13 225:15,

18

yell 24:7 43:12

yelling 20:18 23:8 64:11 89:11,15 130:8, 11,20,24 133:2 186:6

younger 174:19 176:10